

**SERVICE DATA**  
**FILE NO. 053-060**  
**3-SYSTEM**

# **TOSHIBA**

COLOUR TELEVISION

# **210R6FK**

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**210R6FK is exactly the same as 210R6F except for the colour of cabinet. Use this service data in conjunction with service data for Model 210R6F (FILE NO. 050-060).**

## **CABINET REPLACEMENT PARTS LIST**

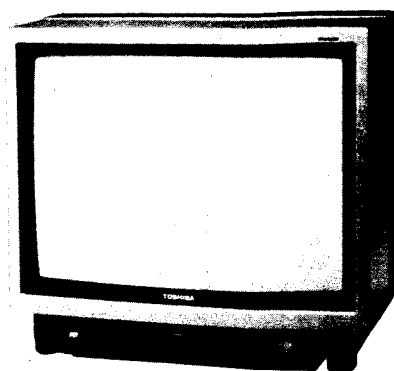
Location No.	Part No.	Description
A201S	23417067	Front Cover
A207	23805620	Leg
A208	23874198	Button, POWER
A216	23832236	Reflector Assembly
A231	23999174	Door
A232	70368125	Push Catch
A251	23832272	Reflector
A401	23999388	Back Cover
A411	23995437	Label, Model Number
A431	23999939	Back Cover, Proper
A701	23523047	Carton Box
A702	23934775	Packing, Bottom
A703	23934776	Packing, Top
A707	23924318	Carton Box, Sub

**SERVICE DATA**  
**FILE NO. 050-060**  
**3-SYSTEM**

# TOSHIBA

COLOUR TELEVISION

# 210R6F



## SPECIFICATIONS

Input Power Rating:	96 watts, AC 220 volts, 50 Hz
Aerial Input Impedance:	75 ohm unbalanced type for VHF and UHF
Receiving Channels:	CCIR L-SECAM Standard: VHF ..... channels B to C and 1 to 6 UHF ..... channels 21 to 69 CCIR B/G-PAL Standard / CCIR B/G-SECAM Standard: VHF ..... channels 2 to 12 UHF ..... channels 21 to 69
Intermediate Frequencies:	Picture I-F carrier frequency L-System ..... 32.7 MHz B/G System (V H, U) ..... 32.7 MHz B/G System (V L) ..... 37.4 MHz Sound I-F carrier frequency L System ..... 39.2 MHz B/G System (V H, U) ..... 38.2 MHz B/G System (V L) ..... 31.9 MHz
Chassis Construction:	IC Solid State, Horizontal Chassis
Picture Tube:	21 in. A51EAL30X01, 510 mm (measured on diagonal of viewable picture area), 90° deflection
Sound Output:	5.0 watts (at 10% harmonic distortion) X 2, Max. 7.0 watts X 2
Speaker:	77 mm Round 2 pcs.
Aux. Terminal:	Headphone Jack, 21 pin socket, AUDIO/VIDEO terminal
Cabinet:	Table type
Dimension:	Height ..... 467 mm Width ..... 500 mm Depth ..... 471 mm
Weight (Net):	28.0 kg

Specifications are subject to change without notice.

## SAFETY INSTRUCTIONS

**WARNING:** BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION," "SAFETY PRECAUTION" AND THE "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

### X-RAY RADIATION PRECAUTION

1. The E.H.T. must be checked every time the receiver is serviced to ensure that the C.R.T. does not emit X-ray radiation as result of excessive E.H.T. voltage. The nominal E.H.T. for this receiver is 26.0 kV at zero beam current (minimum brightness) operating at 220V a.c. The maximum E.H.T. voltage permissible in any operating circumstances must not exceed 27.5 kV. When checking the E.H.T., use the 'High Voltage Check' procedure on page 5 in this manual using an accurate E.H.T. voltmeter.
2. The only source of X-RAY radiation in this receiver is the C.R.T. To prevent X-ray radiation, the replacement C.R.T. must be identical to the original fitted as specified in the Parts List.
3. Some components used in this receiver have safety related characteristics preventing the C.R.T. from emitting X-ray radiation.  
For continued safety, replacement component should only be made after referring the Product Safety Notice below.

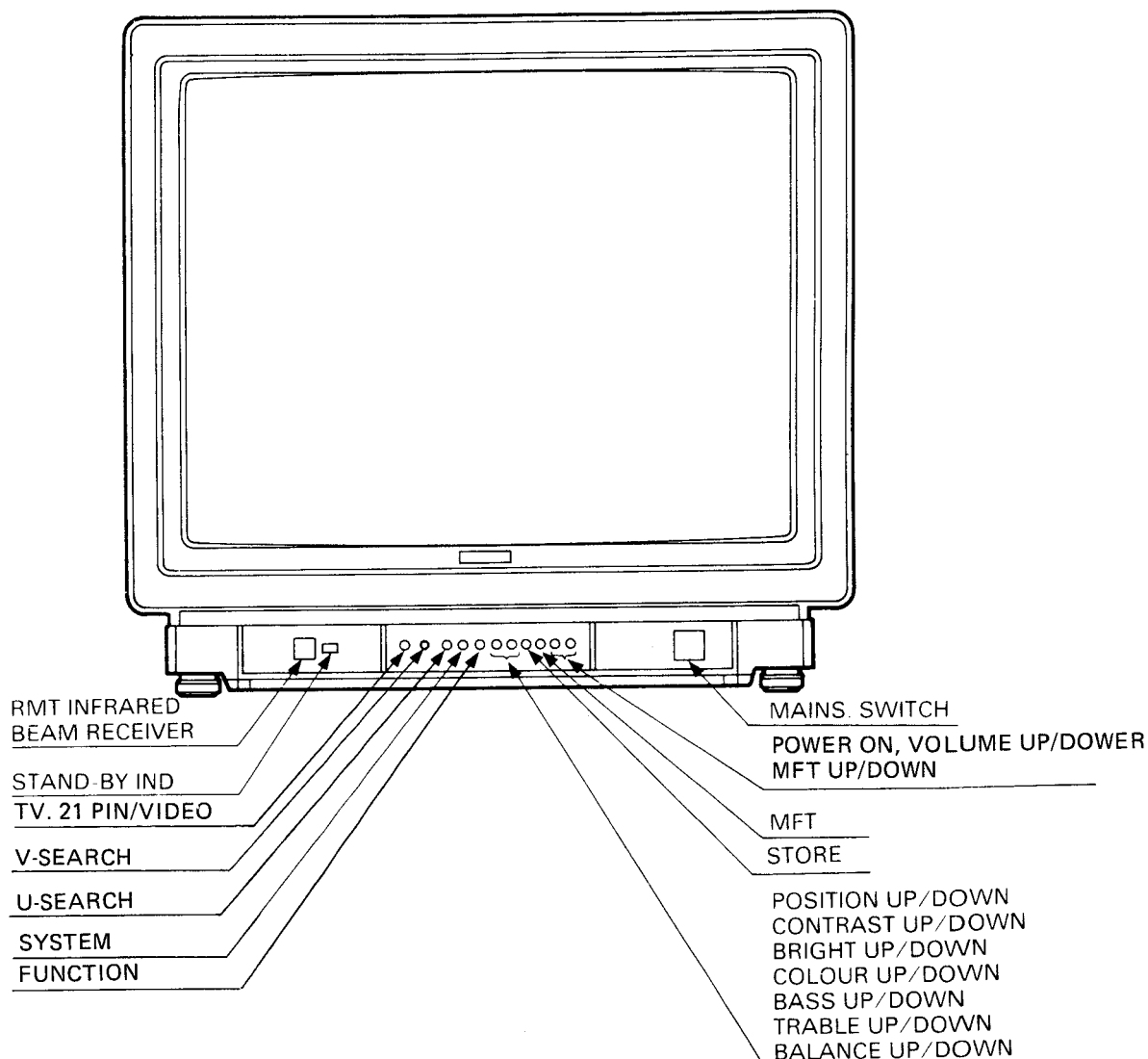
### SAFETY PRECAUTION

1. This receiver has a nominal working E.H.T. voltage of 23.5 kV. Extreme caution should be exercised when working on the receiver with the back removed.  
Do not attempt to service this receiver if you are not conversant with the precautions and procedures for working on high voltage equipment.  
When handling or working on the C.R.T., always discharge the anode to the receiver chassis before removing the anode cap.  
The C.R.T., if broken, will violently expel glass fragments and handling faulty or new C.R.T.'s should be carried out with extreme care.  
Do not hold the C.R.T. by the neck as this is a very dangerous practice.
2. A small part of the chassis used in this receiver is, when operating, at approximately half mains potential at all times. It is therefore essential in the interest of safety that when serving or connecting any test equipment the receiver should be supplied via a suitable isolating transformer of adequate rating.
3. Replace blown fuses within the receiver with the fuse specified in the parts list.
4. When replacing wires or components to terminals or tags, wind the leads around the terminal before soldering. When replacing safety components identified by the international hazard symbols on the circuit diagram and parts list, it must be a Toshiba approved type and must be mounted as the original.
5. Keep wires away from high temperature components.

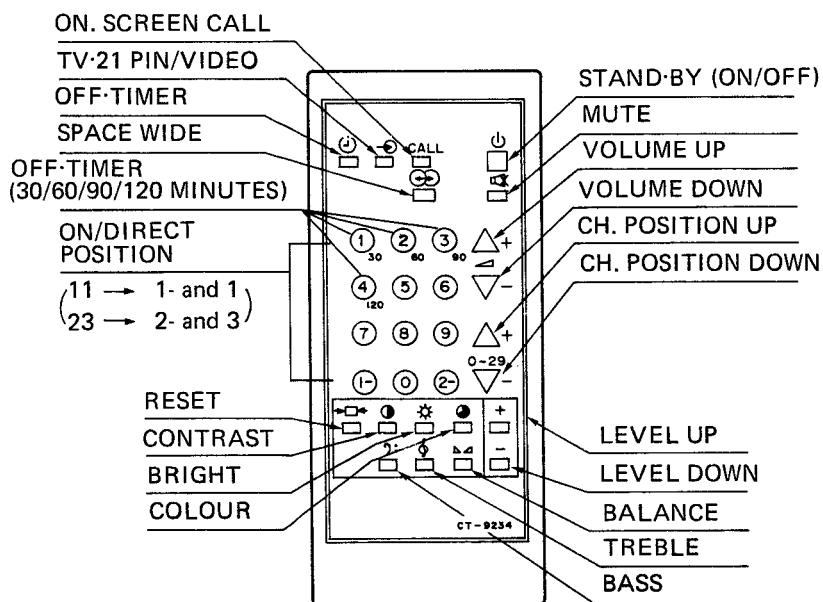
### PRODUCT SAFETY NOTICE

Many electrical and mechanical components in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the X-ray radiation protection afforded them cannot necessarily be obtained by using replacements rated at higher voltages or wattage, etc. Components which have these special safety characteristics in this manual and its supplements are identified by the international hazard symbols on the schematic diagram and parts list. Before replacing any of these components read the parts list in this manual carefully. Substitute replacement components which do not have the same safety characteristics as specified in the parts list may create X-ray radiation.

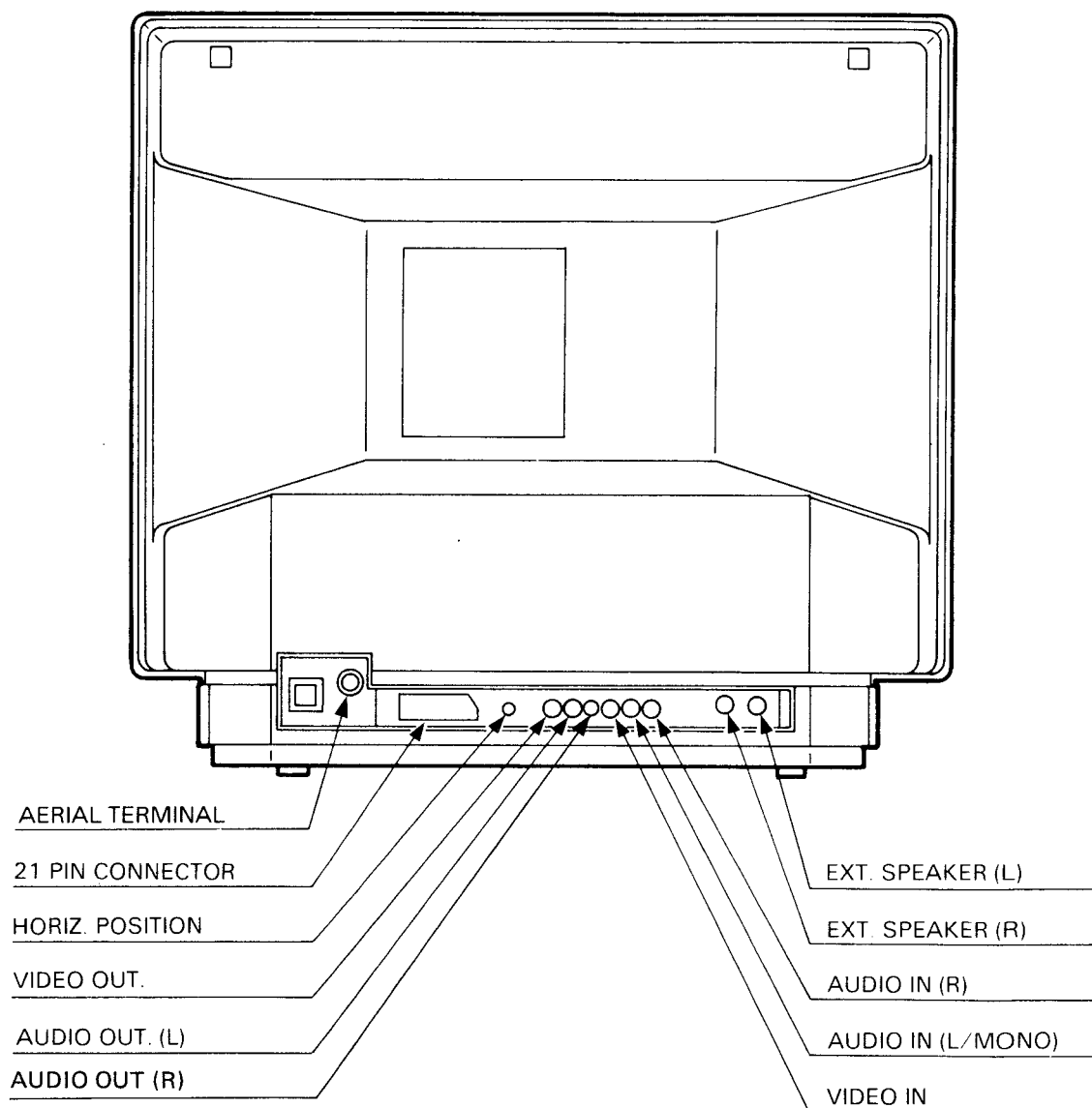
## FRONT CONTROLS VIEW



## REMOTE HAND HELD UNIT



## REAR VIEW



**WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION," "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.**

## INSTALLATION AND SERVICE ADJUSTMENTS

### GENERAL INFORMATION

All adjustments are thoroughly checked and corrected when the receiver leaves the factory. Therefore the receiver should operate normally and produce proper colour and B/W pictures upon installation. However, several minor adjustments may be required depending on the particular location in which the receiver is operated.

This receiver is shipped completely in cardboard carton. Carefully draw out the receiver from the carton and remove all packing materials.

Plug the power cord into a convenient 220 volts 50 Hz AC two pin power outlet. Turn the receiver ON.

Check and adjust all the customer controls such as BRIGHTNESS, CONTRAST and COLOUR Controls to obtain natural colour or B/W picture.

### AUTOMATIC DEGAUSSING

A degaussing coil is mounted around the picture tube so that external degaussing after moving the receiver is normally unnecessary, providing the receiver is properly degaussed upon installation. The degaussing coil operates for about 1 second after the power to the receiver is switched ON. If the set is moved or faced in a different direction, the power switch must be switched off at least 10 minutes in order that the automatic degaussing circuit operates properly.

Should the chassis or parts of the cabinet become magnetized to cause poor colour purity, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube, the sides and front of the receiver and slowly withdraw the coil to a distance of about 2 m before disconnecting it from AC source. If colour shading still persists, perform the COLOUR PURITY ADJUSTMENT and CONVERGENCE ADJUSTMENTS procedures, as mentioned later.

### HIGH VOLTAGE CHECK

**CAUTION:** There is no HIGH VOLTAGE ADJUSTMENT on this chassis.

1. Connect an accurate high voltage meter to the second anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST Controls to minimum (zero beam current).
3. High voltage will be measured below 27.5 kV.
4. Rotate the BRIGHTNESS Control to both extremes to be sure the high voltage does not exceed the limit of 27.5 kV under any conditions.

### HEIGHT ADJUSTMENT

HEIGHT Control (R351) on MAIN Board changes the size of the picture or pattern, having an equal effect on the top and bottom. Make final adjustment to overscan the mask 2 cm at top and bottom.

### HORIZONTAL CENTER ADJUSTMENT

1. Receive the WG PHILIPS pattern.
2. Set the contrast and colour to minimum, and the brightness to maximum.
3. Adjust H, CENTER USER Control (R452) to the click (center) position.
4. Adjust H, CENTER SUB Control (R451) so the pattern center can be located at the screen center.

### FOCUS ADJUSTMENT

Adjust FOCUS Control on FLYBACK TRANS. (T461) for well defined scanning lines in the centre area on the screen.

### DELAYED R-F AGC ADJUSTMENT

1. Tune the set in the strongest station in your area.
2. Turn AGC DELAY Control (R153) on IF Board to fully counterclockwise position.
3. Adjust AGC DELAY Control clockwise until noise (snow) disappears on the screen.

### AFC (Automatic Frequency Control) FIELD ALIGNMENT

1. Tune the set to an active channel and adjust fine tuning for best picture with MFT UP, DOWN buttons.
2. To activate AFC, temporarily tune in the next active channel with SEARCH button and return to the previous channel.
3. Adjust L152 and CN52 for the best tuned picture.
4. Detune to higher or lower side with MFT button. Then temporarily change to the next active channel with SEARCH button, and return to the previous channel to check for the best tuned picture.

### BELL COIL (LM01) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the synchroscope to the terminal Pin 2 of LM01.
3. Adjust LM01 for the flat level of amplitude in each colour bar waveform on the scope. (See figure 1.)

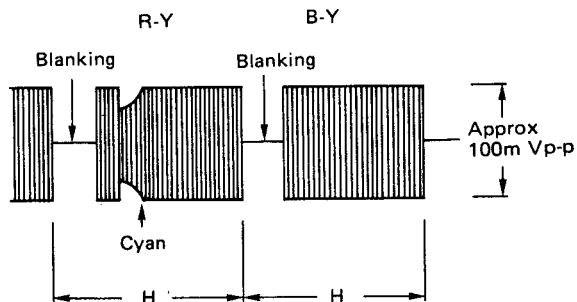


Figure 1.

### IDENT COIL (LM04) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the DC voltmeter (Digital Voltmeter) to the pin 23 of IC501.
3. Adjust LM04 for the maximum indication (approx. DC10V) on the meter.

### B-Y, R-Y DEMOD COIL (LM02, LM03) ADJUSTMENT

1. Receiver SECAM colour bar signal.
2. Set the COLOUR, BRIGHTNESS and CONTRAST Controls free.
3. Connect the synchroscope to the pin 60 of IC501.
4. Adjust LM02 so that the white level in picture part reaches to the vertical retrace line. (See figure 2.)
5. Then change the connection of synchroscope from the pin 60 to the pin 62 of IC501.
6. Adjust LM03 so that the white level in picture part reaches to the vertical retrace line. (See figure 3.)

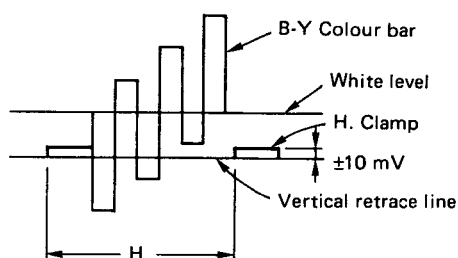


Figure 2.

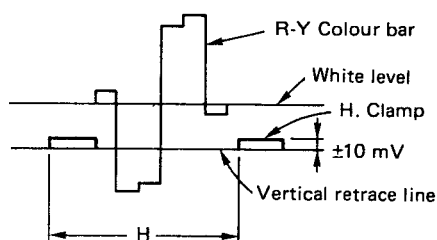


Figure 3.

### PAL MATRIX ADJUSTMENT

1. Tune in the colour programme of the Philips pattern.
2. Set the COLOUR Control VR. to obtain the proper colour.
3. If the PAL MATRIX adjustment is incorrect, the Venetian Blind would appear in the colour bars area. This case needs the adjustment.
4. At the first, adjust DL PHASE ADJ. Coil (L551) to minimize the Venetian Blind.
5. Next adjust 1H-DL ADJ. VR (R551) to minimize the Blind.
6. If the Venetian Blind still remains, adjust 1H-DL PHASE ADJ. Coil (L551) to minimize the Blind again.
7. Repeat the item 5 and 6 procedures, adjust the R551 and L551 until the Blind does not appear.

### CRT GREY SCALE ADJUSTMENT

1. Tune in an active channel.
2. Turn the SCREEN Control (on T461) fully counter clockwise.
3. By rotating the RED, GREEN and BLUE CUT OFF Controls (R557, R558, R559) counterclockwise to the minimum.
4. Set the GREEN and BLUE DRIVE Controls (R252, R253) to the mid position.
5. Set the SERVICE SW. (S202) in the H, line position.
6. Short temporarily Terminal RASTER CHIP on the CRT DRIVE Board.
7. Set the CONTRAST, COLOUR Controls to minimum and BRIGHTNESS Control to centre position.
8. Rotate the SCREEN Control gradually clockwise until the first line appears slightly on the screen. Then turn fully counterclockwise the two CUT OFF Controls corresponding to the colours of the first and the second horizontal lines to eliminate the lines.
9. Rotate the SCREEN Control gradually clockwise until the first horizontal line of a colour (RED, GREEN or BLUE) appears slightly on the screen. Set the SCREEN Control to this position. At the base of the colour, rotate the remaining two CUT OFF Controls gradually clockwise until the horizontal lines of each colour appear slightly on the screen.
10. Open the terminal RASTER CHIP on the CRT DRIVE Board.
11. Adjust the CUT OFF Controls to obtain the slightly lighted horizontal lines in the same levels of three colours (RED, GREEN and BLUE). The lines may look like white if the CUT OFF Controls are adjusted properly.
12. Return the SERVICE SW. (S202) in the Recieving position.
13. Set the BRIGHTNESS Control to the maximum and COLOUR Control to the minimum.
14. Adjust the BLUE and GREEN DRIVE Controls (R252/R253) to obtain proper white-balanced picture in high light areas.
15. Set the BRIGHTNESS and CONTRAST Controls to obtain dark grey raster. Then check the white balance in low brightness. If the white balance is not proper, retouch the CUT OFF Controls and DRIVE Controls to obtain a good white balance in both low and high light areas

### SUB-BRIGHTNESS ADJUSTMENT

1. Tune in a colour programme.
2. Set the CONTRAST Control to the minimum and the BRIGHTNESS Control to the centre.
3. Set the COLOUR Control to the minimum.
4. Set the SUB-BRIGHT. Control (R255) to the centre and leave the receiver for five minutes in this state.
5. Watching the picture well, adjust the SUB-BRIGHT. Control in the position where the picture does not show evidence of blooming in high bright area and not appear too dark in low bright portion.
6. Check the proper picture variation by rotating the CONTRAST and BRIGHTNESS Controls to both extremes.
7. If the picture does not appear dark with the CONTRAST and BRIGHTNESS Controls turned to the minimum, or not appear bright with the controls turned to the maximum, adjust the SUB-BRIGHT. Control again for the acceptable picture.

## PICTURE I-F SWEEP ALIGNMENT

- GENERAL** ..... Refer to Figure 4 for test equipment connection.
- PRELIMINARY STEPS** ..... 1. Disconnect the solder link SL-1 and SL-2 (see Figure 4) on the foil side of the Back Terminal Board.
2. Supply +12 volts to the Back Terminal Board.
3. Short the collector of QN03 to Ground to reduce the voltage at pin 30 of IC101 to below 1 volt.
4. Turn AGC DELAY Control (R153) on the Back Terminal Board fully clockwise.
- SWEEP/MARKER/GENERATOR** ... Connect to point (d) as shown in Figure 4 on the Back Terminal Board.
- Set to 30 ~ 40 MHz sweep with signal level of 75 ~ 85 dB $\mu$ .
- OSCILLOSCOPE** ..... Connect with direct probe to pin 31 of IC101 on the Back Terminal Board through 100 kohm resistor.

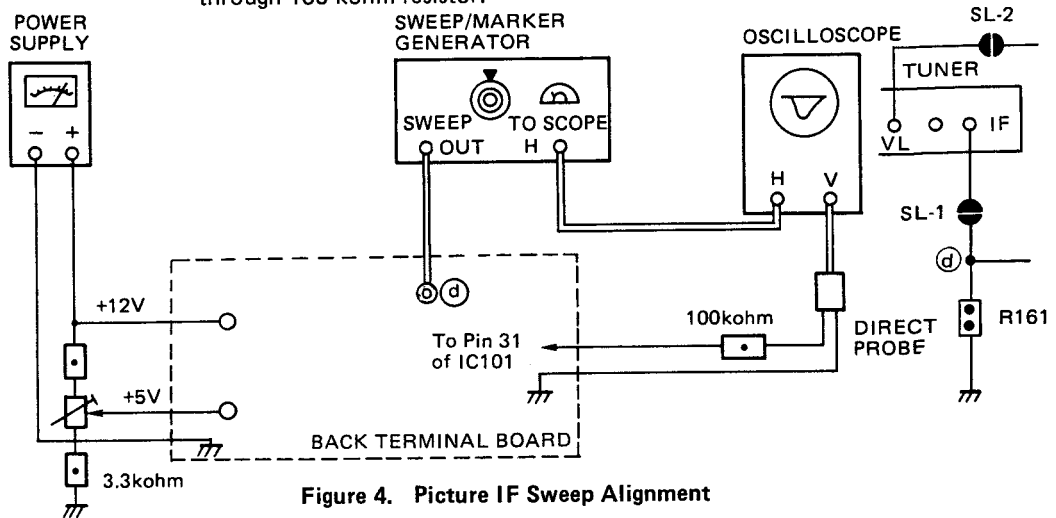


Figure 4. Picture IF Sweep Alignment

STEP	SWEEP/MARKER GENERATOR	ADJUST	REMARKS
1. Detector Coil (L151)	37.4 MHz Marker "ON"	L151	<ul style="list-style-type: none"> <li>Short the junction of RN24 and RN26 on the Back Terminal Board to ground.</li> <li>Supply +3 to +6 volts to pin 4 of IC101 to set the output level for 0.4 Vp-p on the scope.</li> <li>Adjust L151 so that the marker position (37.4 MHz) on the response can lower to minimum. (See Figure 5.)</li> <li>Remove the short of the junction of RN24 and RN26.</li> <li>After completing CN51 adjustment, repeat this step again.</li> </ul>
2. Detector Capacitor (CN51)	32.7 MHz Marker "ON"	CN51	<ul style="list-style-type: none"> <li>Supply +3 to +6 volts to pin 4 of IC101 to set the detection output for 0.4 Vp-p on the scope.</li> <li>Adjust CN51 so that the marker position (32.7 MHz) on the response can lower to minimum. (See Figure 5.)</li> <li>After completing L151 adjustment, repeat the step again.</li> </ul>
After completing the above steps, disconnect the equipment and re-solder the links on the Back Terminal Board, and adjust the AGC Delay control (R153) following DELAYED RF AGC ADJUSTMENTS.			



Figure 5. Magnified Response Curve

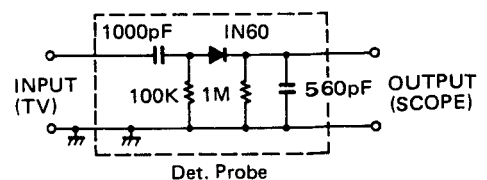


Figure 6.



## AFC ALIGNMENT

- GENERAL** ..... Refer to Figure 7 for test equipment connection.
- PRELIMINARY STEPS** ..... 1. Disconnect the solder links SL-1, SL-2, SL-3, and SL-4 (Ⓢ) See Figure 7) on the foil side of the Back Terminal Board.
2. Supply +12 volts to the Back Terminal Board. (See Figure 7.)
3. Short the collector of QN03 to Ground to reduce the voltage at pin 30 of IC101 to below 1 volt.
4. Turn AGC DELAY Control (R153) on the Back Terminal Board fully clock-wise.
- DVM** ..... Connect to the resistor R125 (Ⓢ in Figure 7) and ground.

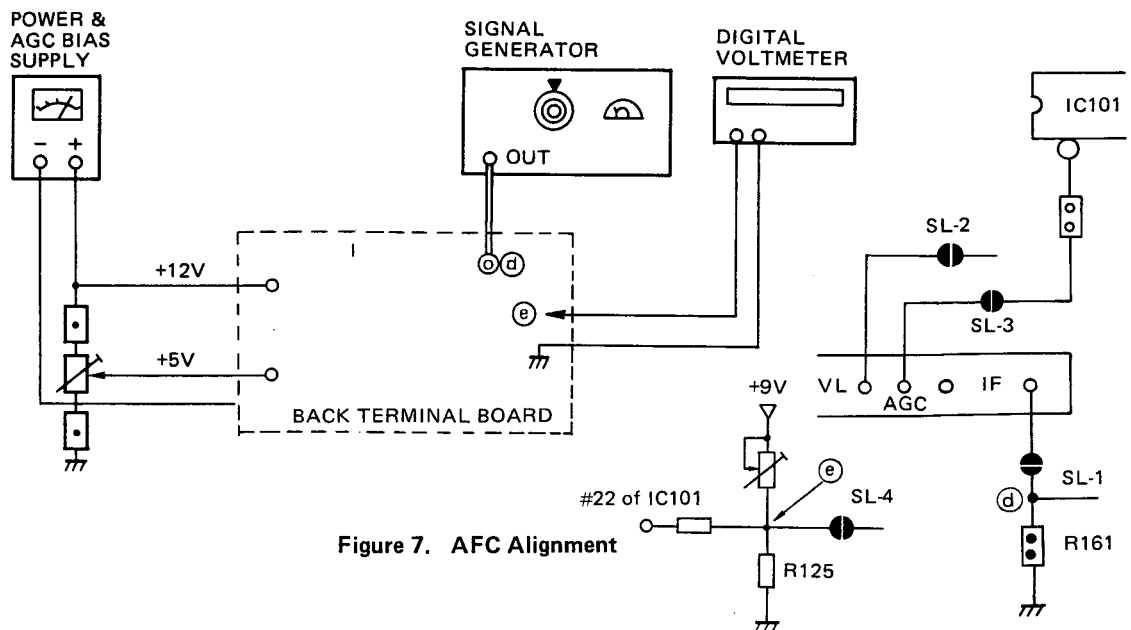


Figure 7. AFC Alignment

STEP	SIGNAL GENERATOR	ADJUST	REMARKS
1. AFC Balance (R152)	NO SIGNAL	R152	<ul style="list-style-type: none"> <li>Short the pin 4 of IC101 to ground.</li> <li>Adjust R152 for 4.5 volts at the point Ⓢ in Figure 7.</li> </ul>
2. AFC Coil (L152)	37.4 MHz CARRIER WAVE (Level: 75 to 85 dBμ)	L152	<ul style="list-style-type: none"> <li>Remove the short of pin 4 of IC101.</li> <li>Short the junction of RN24 and RN26 to ground.</li> <li>Connect IF carrier wave to the point Ⓢ in Figure 7.</li> <li>Adjust L152 for 4.3 volts on the meter at the point Ⓢ.</li> <li>After completing CN52 adjustment, repeat this step again.</li> </ul>
3. AFC Capacitor (CN52)	32.7 MHz CARRIER WAVE (Level: 75 to 85 dBμ)	CN52	<ul style="list-style-type: none"> <li>Remove the short of RN24 and RN26 to ground.</li> <li>Connect IF carrier wave to the point Ⓢ in Figure 7.</li> <li>Adjust CN52 for 4.3 volts on the meter at the point Ⓢ.</li> <li>After completing L152 adjustment repeat this step again.</li> </ul>

## SECAM DET-OUT & SOUND IF ALIGNMENT

### L SECAM DET-OUT (R151) ADJUSTMENT

1. Unsolder the solder link SL-1 to disconnect.
2. Supply +12 V to the Back Terminal Board.
3. Short Base of QN03 to ground to keep the voltage at pin 30 of IC101 in 4 volts.
4. Set AGC to Self AGC condition.
5. Connect synchroscope to pin 31 of IC101 through 10:1 probe.
6. Connect the 2-signal generator to IF input, and set up the generator as described below.  
 IF frequency : 32.7 MHz  
 Signal level : 75 to 85 dB $\mu$   
 Video modulation  
 Positive modulation : 97%  
 Video signal fH : 15.625 kHz  
 Picture : Pattern with 100% white
7. Adjust the AC LEVEL Control (R151) for 1.6Vp-p on the scope.

### SECAM SOUND DET (L651) ADJUSTMENT

1. Supply +12V to pin 7 of IC601 through 1K ohm resistor.
2. Connect the Sweep generator to IF input.  
 Sweep range : 30 to 40 MHz  
 Level : 75 to 85 dB $\mu$   
 Marker : 39.2 MHz
3. Connect the oscilloscope to pin 20 of IC601 through 100 kohm resistor.
4. Apply AGC voltage (1 to 3V) to pin 19 of IC601, and fix the AGC voltage for 0.4 volts of output level on the scope.
5. Adjust SECAM SOUND DET Control (L651) so that the marker point (39.2 MHz) on the response can be maximum.

### PAL SIF DET (L652) ADJUSTMENT

1. Short pin 7 of IC601 to ground.
2. Connect SIF generator to pin 13 of IC601 through 0.01  $\mu$ F capacitor.
3. Connect the oscilloscope to pin 20 of IC601.
4. Set up the SIF generator as described below.  
 Sound carrier frequency : 5.5 MHz  
 Modulation frequency : 1000 Hz  
 Frequency deviation :  $\pm 15$  kHz  
 Signal level : 80 dB $\mu$  (50 ohm load)
5. Adjust L652 for the maximum response of 1000 Hz det-out on scope.

## INFRARED SENSOR AMP ALIGNMENT (Remote Control Receiver)

### TUNING FREQUENCY ADJUSTMENT

When LK01 or CK01 is replaced, readjustment is required. During adjustment, keep the VOLUME DOWN Button on the remote control hand unit pressed.

1. Turn the TV set on.
2. Connect an oscilloscope across CK01. (See figure 8.)
3. Adjust LK01 for the maximum amplitude of waveform (See figure 9.) while holding down VOLUME DOWN Button on the hand unit.

4. Rotate the core of LK01 for the maximum amplitude of waveform on the scope, clockwise from the fully counterclockwise position. (See figure 9.)  
 Note: While adjustment, face the remote hand unit to such direction as to keep 1 Vp-p amplitude of waveform to prevent the saturation of response.
5. After completing adjustment, check the effective distance of the hand unit for approx. 5 meters or more.

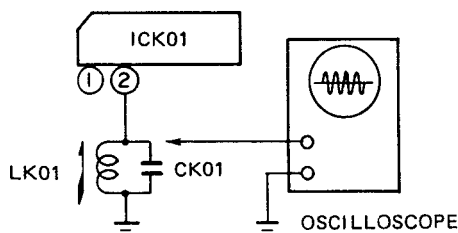


Figure 8. Equipment Connections

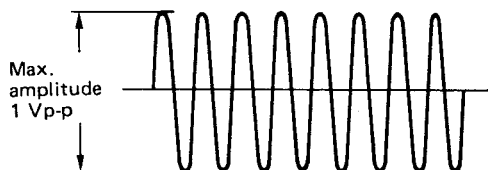


Figure 9. Waveform

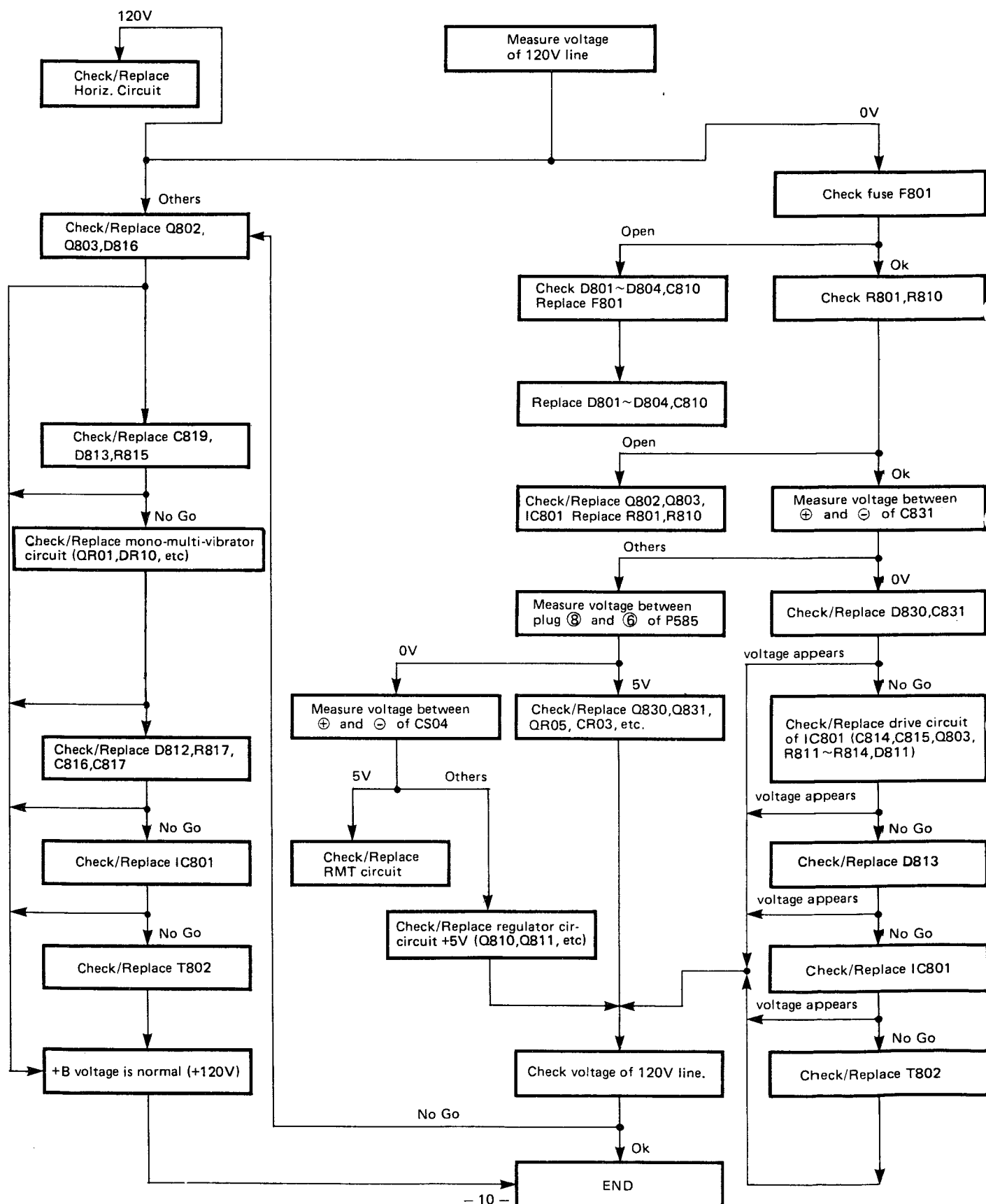
## TROUBLESHOOTING CHARTS

The following charts are devoted to troubleshooting which, if followed carefully, will assist you in tracking down a fault to the correct stage.

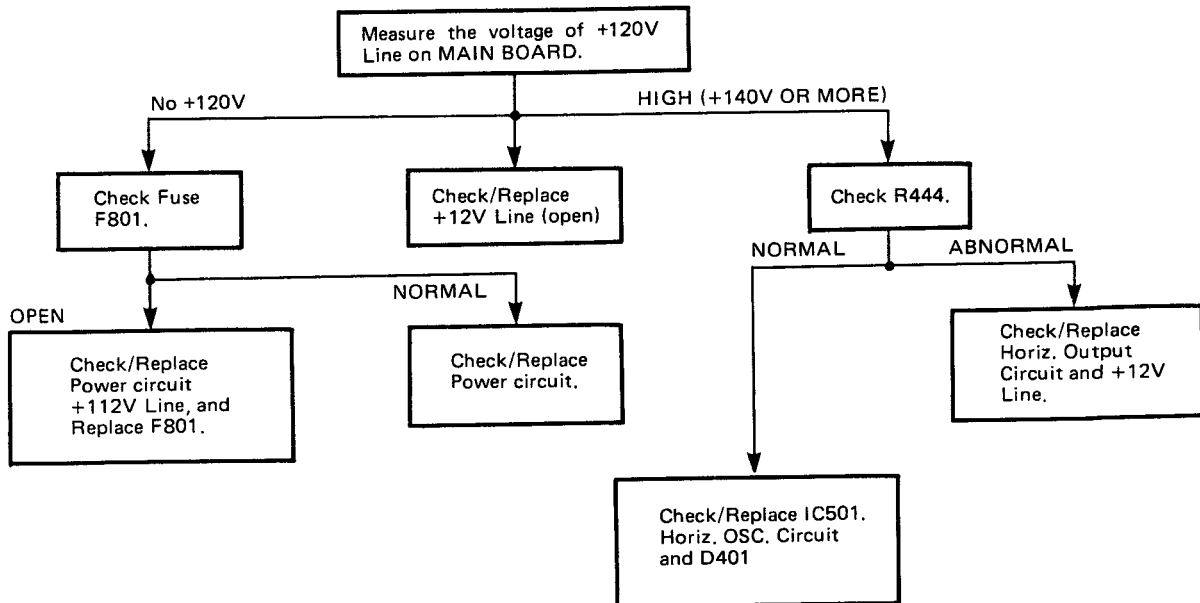
In order to utilize the charts (fault trees), firstly establish the complaint, i.e. – No Raster, No Sound.

Locate the chart applicable and then progress through the various alternatives until a final block indicates the offending components or stage.

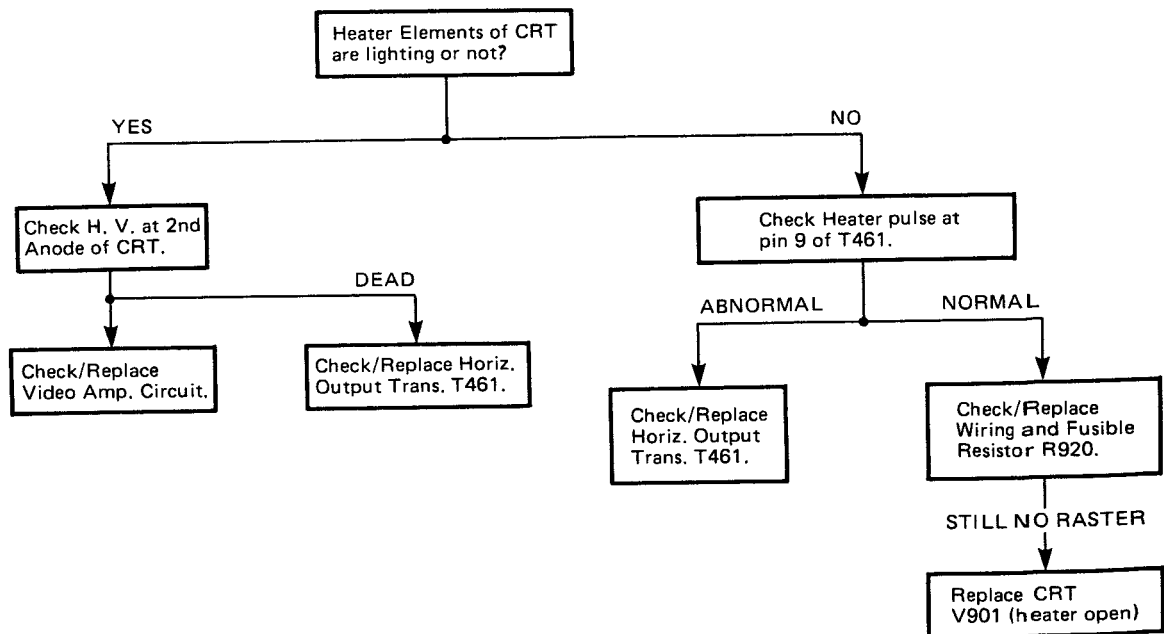
### 1. NO RASTER AND NO SOUND



## 2. NO RASTER (NOISE OR WEAK SOUND)

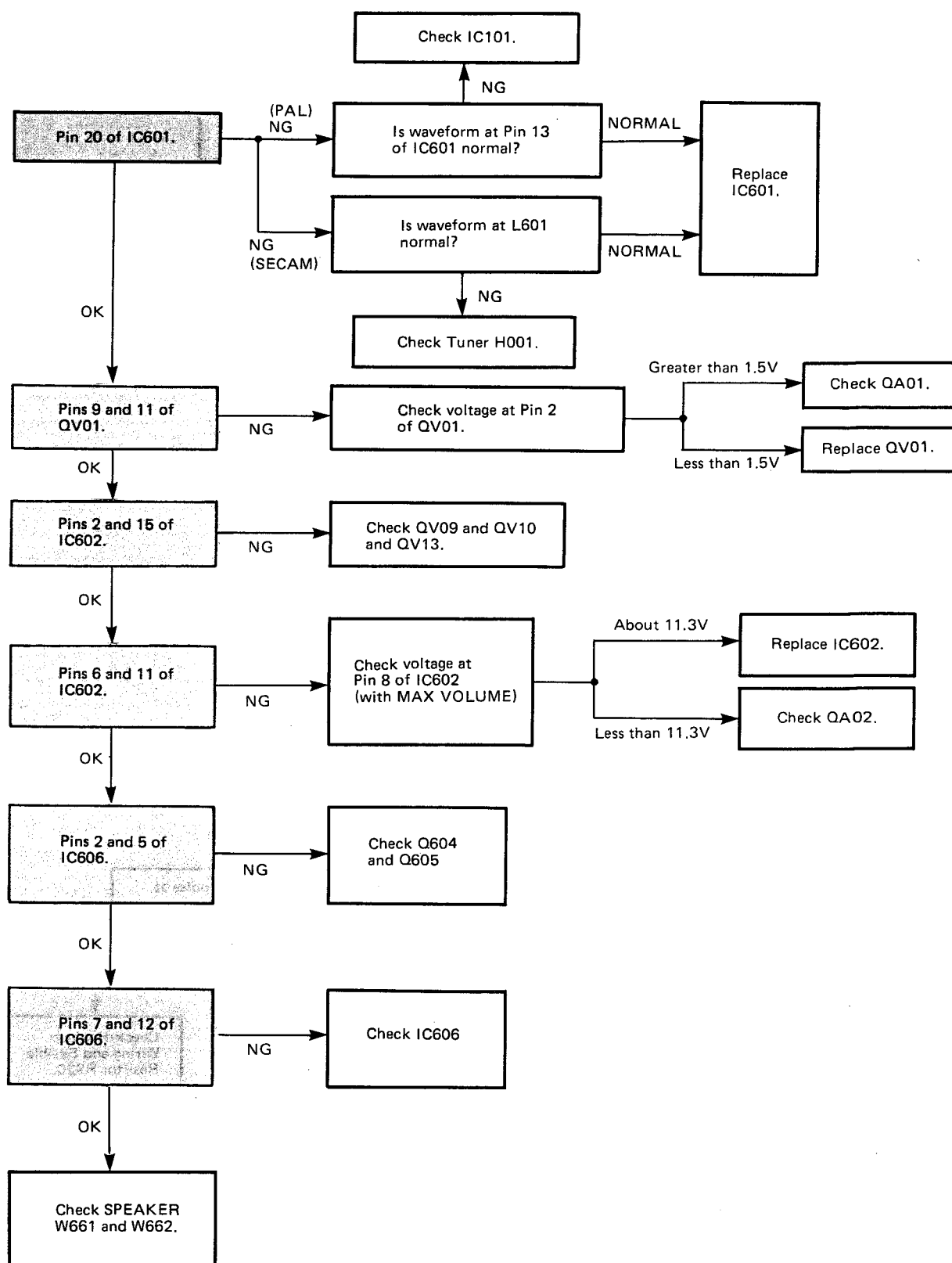


## 3. NO RASTER (SOUND OK)



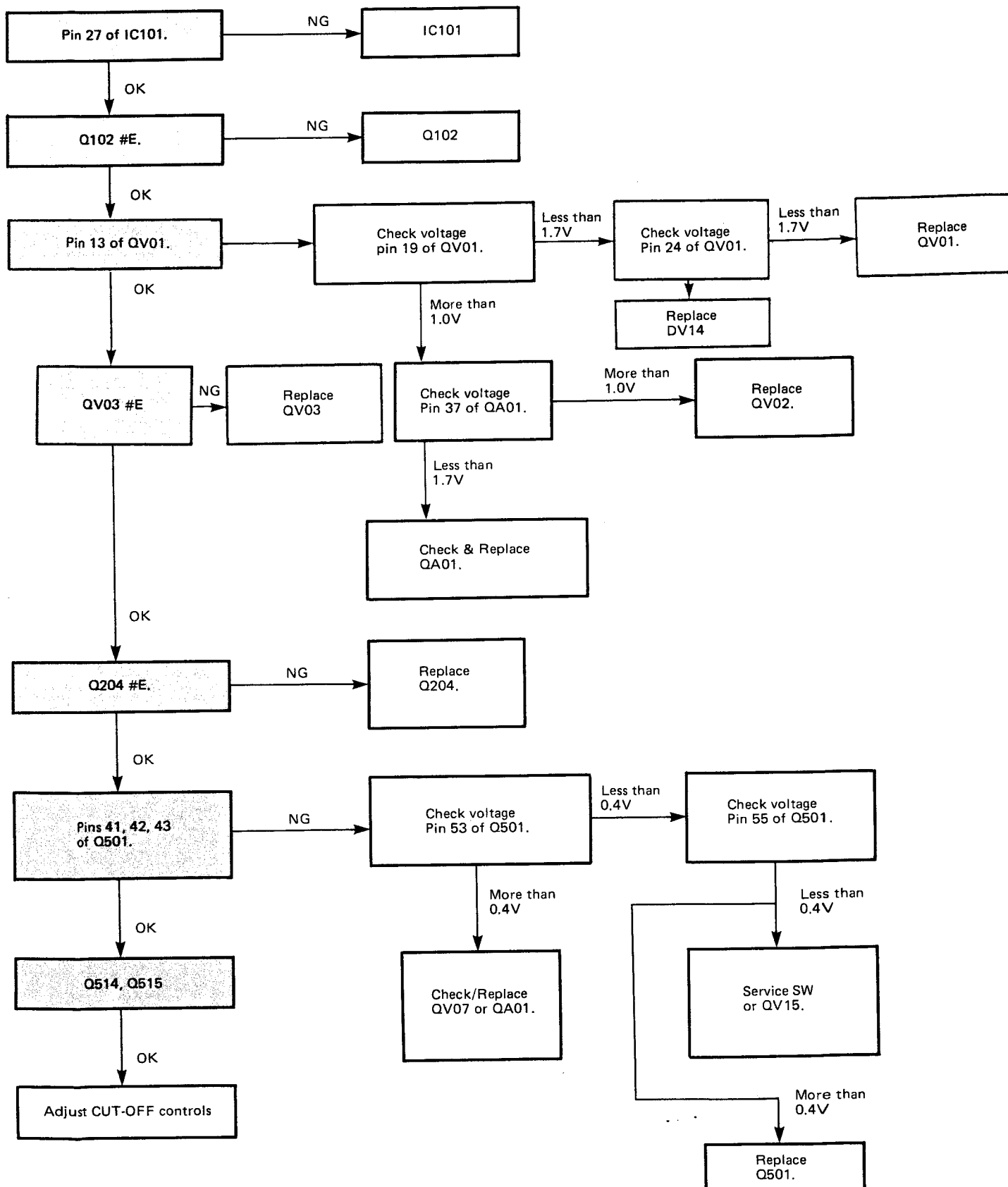
#### 4. NO SOUND

**NOTE:** Check the sound signal waveform for shaded area below.



## 5. NO PICTURE

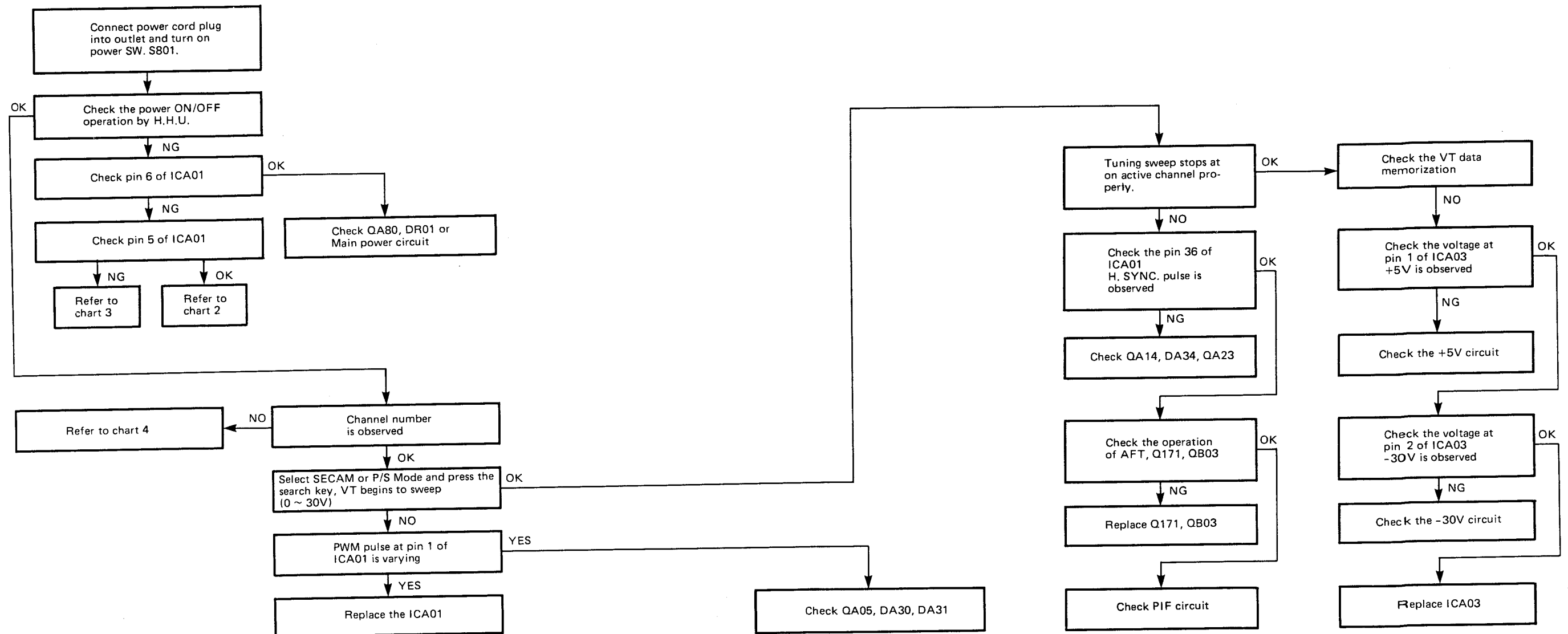
Check video signal waveform for shaded area below.



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## 6. CHANNEL SELECTOR TROUBLE

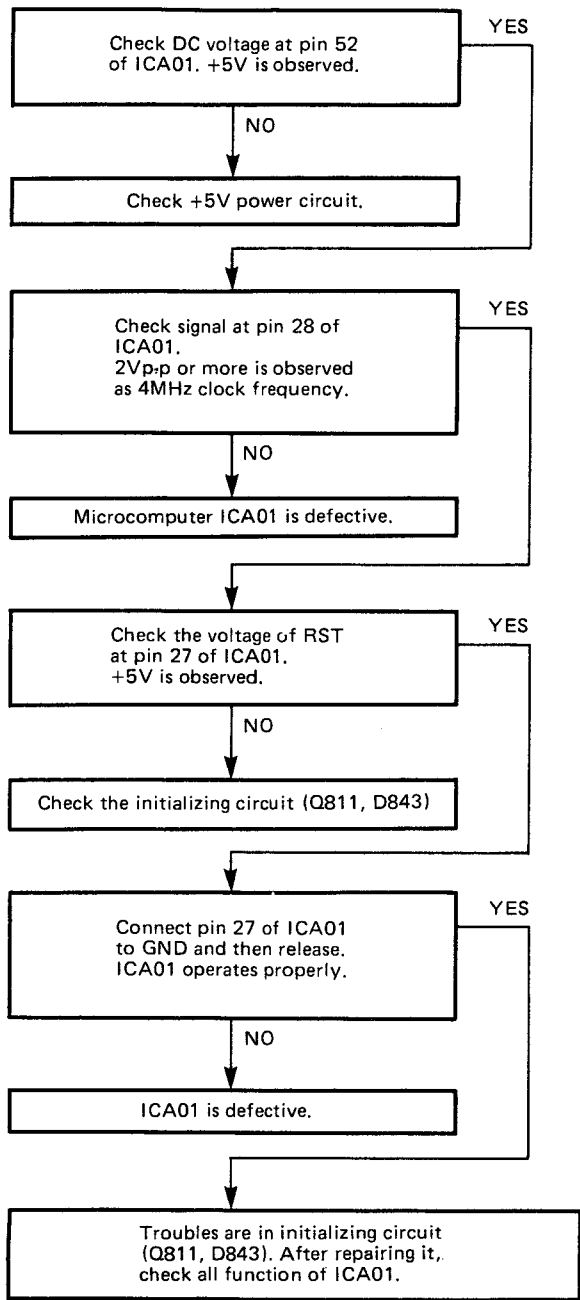
[CHART 1]





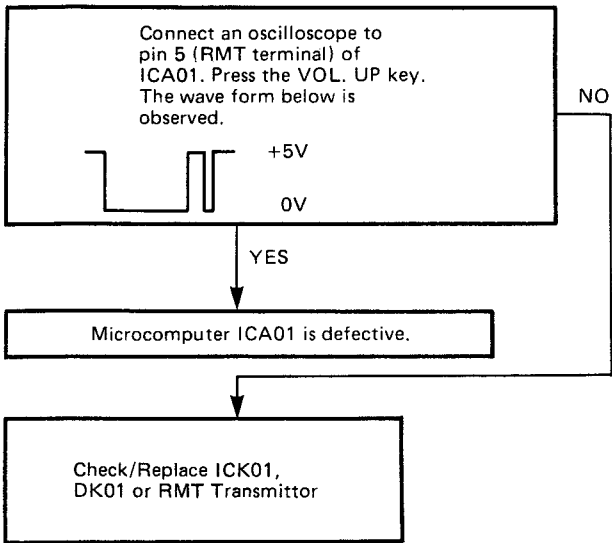
[CHART 2] Microcomputer (ICA01) Operation Check

**Note:** Before checking Microcomputer, check that control buttons and their connection work properly.



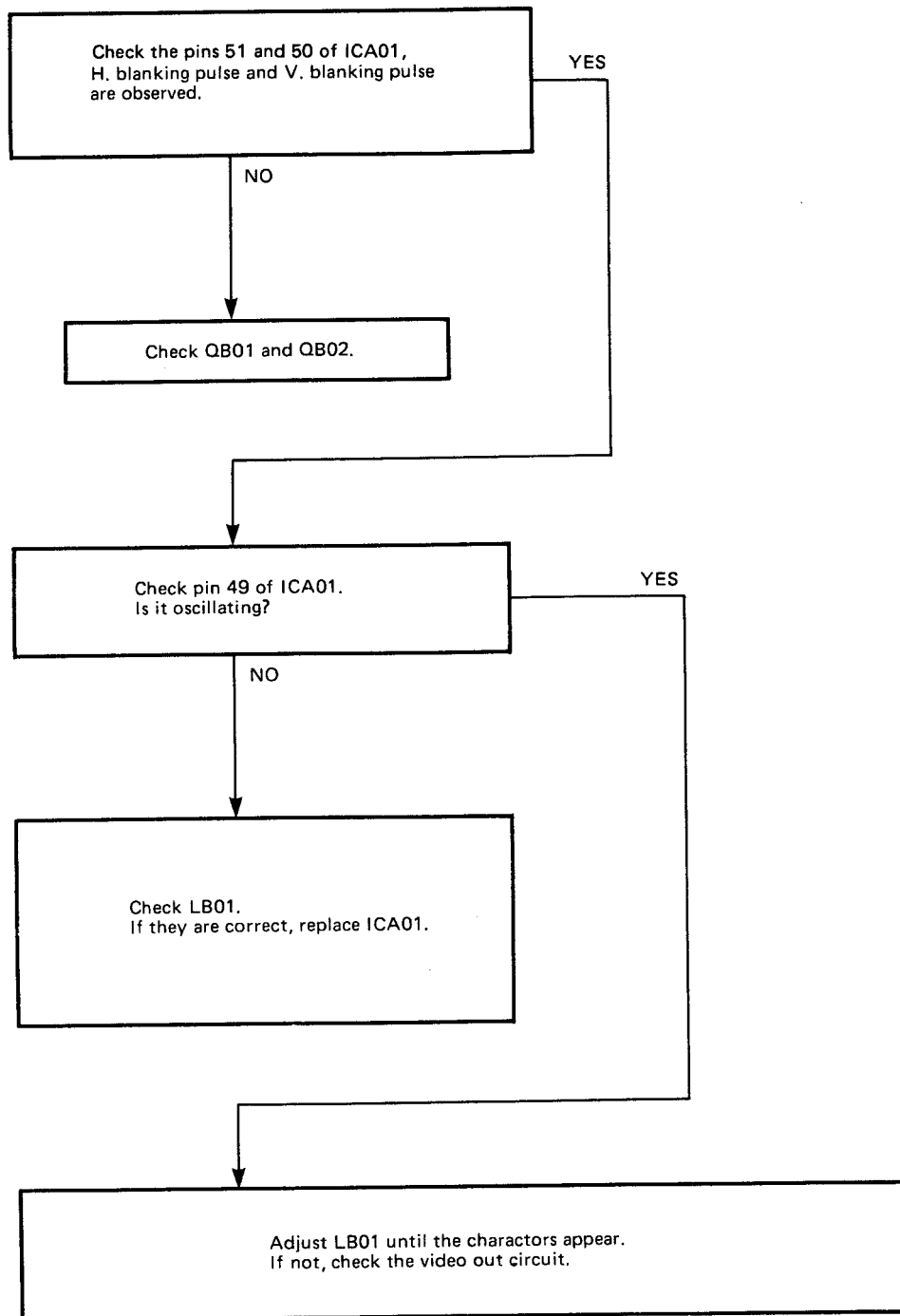
[CHART 3] Remote Control Operation Check

**Note:** Before checking RMT operation, check that key operation on TV set is proper.

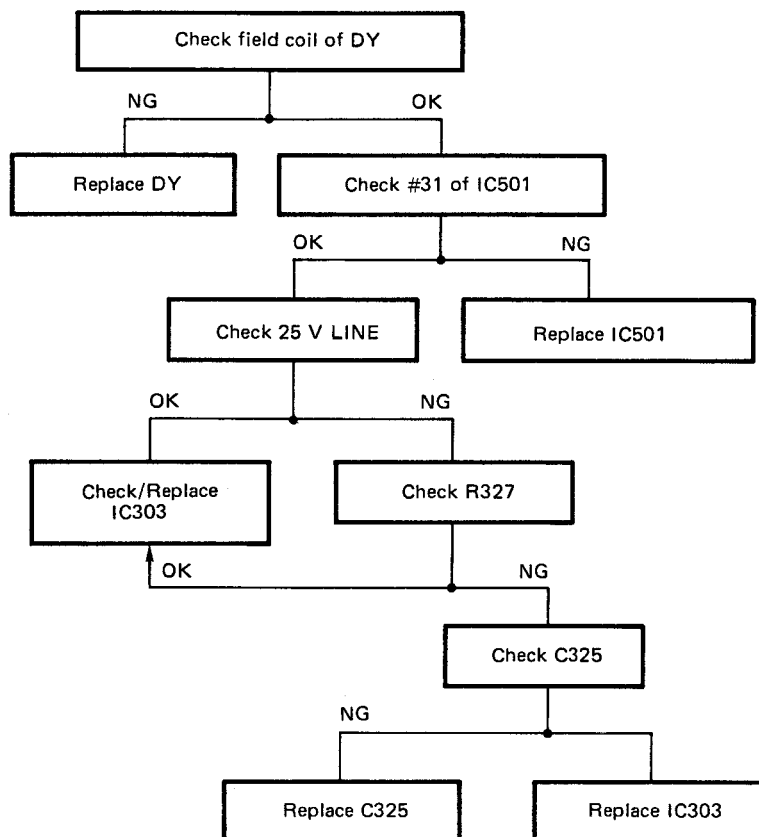


[CHART 4]

(1) On Screen Display Operation Check



## 7. NO VERT. SCAN (ONE HORIZ. LINE RASTER)



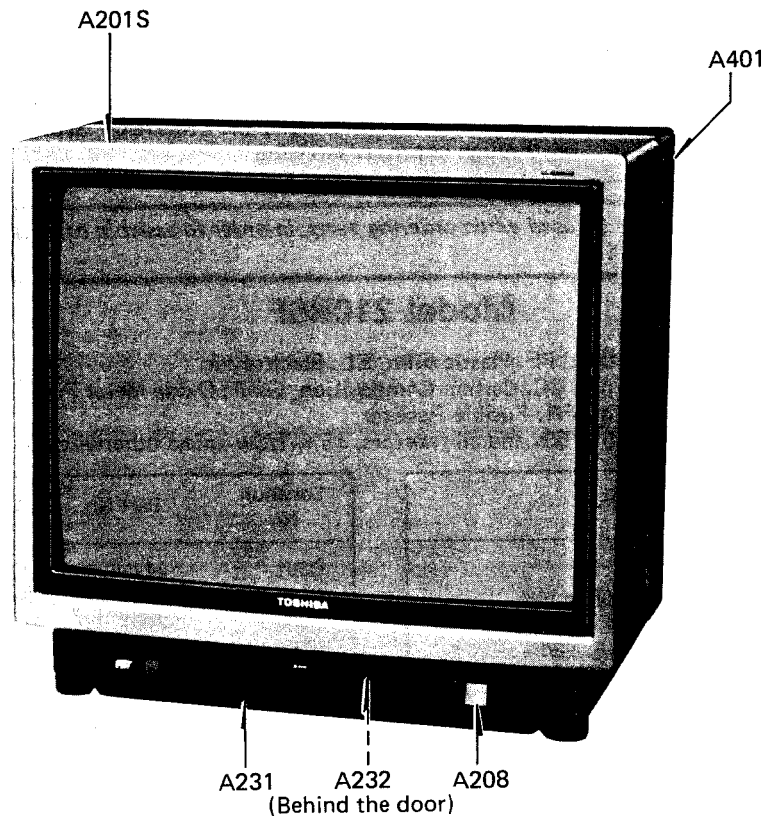
## 8. OUT OF VERT. SYNC. AND HORIZ. SYNC.

Check/Replace Sync Circuit pin 33 of IC501.

## 9. OUT OF HORIZ. SYNC.

Check/Replace Horiz. OSC Circuit and Horiz. AFC Circuit connected to Pins 36, 37 and 38 of IC501.  
Check/Replace IC501.

## CABINET REPLACEMENT PARTS LIST



Location No.	Part No.	Description
A201S	23417562	Front Cover
A207	23805620	Leg
A208	23874198	Button, POWER
A216	23832236	Reflector Assembly
A231	23999174	Door
A232	70368125	Push Catch
A251	23832272	Reflector
A401	23999388	Back Cover
A411	23995437	Label, Model Number
A431	23999939	Back Cover, Proper
A701	23924116	Carton Box
A702	23934775	Packing, Bottom
A703	23934776	Packing, Top
A707	23924318	Carton Box, Sub

## CHASSIS REPLACEMENT PARTS LIST

**WARNING:** BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

**CAUTION:** The international hazard symbols in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2. Do not degrade the safety of the receiver through improper servicing.

**NOTICE:** The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.

### Model 210R6F

#### ABBREVIATIONS:

Capacitors . . . . CD: Ceramic Disk, PF: Plastic Film, EL: Electrolytic

Resistors . . . . . CF: Carbon Film, CC: Carbon Composition, OMF: Oxide Metal Film, VR: Variable Resistor.

MF: Metal Film, FR: Fusible Resistor.

(All CD and PF capacitors are  $\pm 5\%$ , 50v and all resistors,  $\pm 5\%$ , 1/6w unless otherwise noted.)

Location No.	Part No.	Description
<b>CAPACITORS</b>		
C101	24212102	CD, 1000pF, $\pm 10\%$
C102	24436471	CD, 470pF
C103	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C104	24617993	EL, 1 $\mu$ F, $\pm 20\%$ , 50V
C105	24617993	EL, 1 $\mu$ F, $\pm 20\%$ , 50V
C106	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C107	24206229	EL, 2.2 $\mu$ F, 50V
C110	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C111	24203100	EL, 10 $\mu$ F, 16V
C112	24550153	PF, 0.015 $\mu$ F, 63V
C113	24085988	EL, 1 $\mu$ F, $\pm 20\%$ , 50V, Non-Polar
C114	24636100	EL, 10 $\mu$ F, 50V
C115	24206478	EL, 0.47 $\mu$ F, 50V
C116	24212102	CD, 1000pF, $\pm 10\%$
C117	24206479	EL, 4.7 $\mu$ F, 50V
C118	24353110	CD, 11pF
C119	24212102	CD, 1000pF, $\pm 10\%$
C120	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C121	24636100	EL, 10 $\mu$ F, 50V
C122	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C123	24436100	CD, 10pF, $\pm 0.25$ pF
C124	24212102	CD, 1000pF, $\pm 10\%$
C126	24436820	CD, 82pF
C161	24212102	CD, 1000pF, $\pm 10\%$
C162	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C163	24212102	CD, 1000pF, $\pm 10\%$
C164	24212102	CD, 1000pF, $\pm 10\%$
C165	24212102	CD, 1000pF, $\pm 10\%$
C173	24550104	PF, 0.1 $\mu$ F, 63V
C201	24636100	EL, 10 $\mu$ F, 50V
C202	24797101	EL, 100 $\mu$ F, 50V
C203	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C204	24636100	EL, 10 $\mu$ F, 50V
C205	24206478	EL, 0.47 $\mu$ F, 50V
C208	24212102	CD, 1000pF, $\pm 10\%$
C209	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C210	24636100	EL, 10 $\mu$ F, 50V
C240	24206478	EL, 0.47 $\mu$ F, 50V
C241	24436181	CD, 180pF

Location No.	Part No.	Description
C301	24206229	EL, 2.2 $\mu$ F, 50V
C302	24212152	CD, 1500pF, $\pm 10\%$
C303	24617891	EL, 1 $\mu$ F, $\pm 10\%$ , 50V
C304	24212102	CD, 1000pF, $\pm 10\%$
C305	24206229	EL, 2.2 $\mu$ F, 50V
C306	24636100	EL, 10 $\mu$ F, 50V
C307	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C310	24530104	PF, 0.1 $\mu$ F, $\pm 10\%$ , 63V
C311	24796222	EL, 2200 $\mu$ F, 35V
C314	24214271	CD, 270pF, $\pm 10\%$ , 500V
C315	24214221	CD, 220pF, $\pm 10\%$ , 500V
C316	24796332	EL, 3300 $\mu$ F, 35V
C317	24617981	EL, 2.2 $\mu$ F, $\pm 10\%$ , 50V
C318	24214332	CD, 3300pF, $\pm 10\%$ , 500V
C319	24693622	PF, 6200pF, 100V
C323	24212332	CD, 3300pF, $\pm 10\%$
C325	24796101	EL, 100 $\mu$ F, 35V
C326	24550563	PF, 0.056 $\mu$ F, 63V
C328	24214222	CD, 2200pF, $\pm 10\%$ , 500V
C403	24206479	EL, 4.7 $\mu$ F, 50V
C405	24593203	PF, 0.02 $\mu$ F
C406	24593203	PF, 0.02 $\mu$ F
C407	24593303	PF, 0.03 $\mu$ F
C408	24794101	EL, 100 $\mu$ F, 16V
C409	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C412	24593182	PF, 1800pF
C413	24593182	PF, 1800pF
C416	24214271	CD, 270pF, $\pm 10\%$ , 500V
C424	24797470	EL, 47 $\mu$ F, 50V
C425	24203101	EL, 100 $\mu$ F, 16V
△ C440	24095916	PF, 9100pF, 1600V
C441	24214221	CD, 220pF, $\pm 10\%$ , 500V
△ C442	24095947	PF, 0.39 $\mu$ F, 200V
△ C444	24442391	CD, 390pF, $\pm 10\%$ , 2kV
C445	24095903	PF, 0.056 $\mu$ F, $\pm 10\%$ , 250V
C447	24644479	EL, 4.7 $\mu$ F, 250V
C448	24795102	EL, 1000 $\mu$ F, 25V
C449	24794471	EL, 470 $\mu$ F, 16V
C451	24640992	EL, 33 $\mu$ F, 160V
△ C463	24212222	CD, 2200pF, $\pm 10\%$
C501	24797220	EL, 22 $\mu$ F, 50V

Location No.	Part No.	Description
C502	24436150	CD, 15pF
C503	24436360	CD, 36pF
C504	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C505	24593273	PF, 0.027 $\mu$ F
C506	24436101	CD, 100pF
C507	24593103	PF, 0.01 $\mu$ F
C508	24085028	EL, 2.2 $\mu$ F, 25V, Non-Polar
C509	24353330	CD, 33pF
C510	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C511	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C512	24353200	CD, 20pF
C513	24436181	CD, 180pF
C514	24436181	CD, 180pF
C515	24206010	EL, 1 $\mu$ F, 50V
C516	24550104	PF, 0.1 $\mu$ F, 63V
C517	24550104	PF, 0.1 $\mu$ F, 63V
C518	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C519	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C520	24206478	EL, 0.47 $\mu$ F, 50V
C521	24550474	PF, 0.47 $\mu$ F, 63V
C522	24550474	PF, 0.47 $\mu$ F, 63V
C523	24550474	PF, 0.47 $\mu$ F, 63V
C524	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C525	24436820	CD, 82pF
C526	24436820	CD, 82pF
C527	24436820	CD, 82pF
C529	24436241	CD, 240pF
C531	24550474	PF, 0.47 $\mu$ F, 63V
C532	24436180	CD, 18pF
C535	24206100	EL, 10 $\mu$ F, 50V
C536	24206478	EL, 0.47 $\mu$ F, 50V
C537	24203101	EL, 100 $\mu$ F, 16V
C539	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C603	24436470	CD, 47pF
C604	24436470	CD, 47pF
C605	24598102	PF, 1000pF
C606	24212472	CD, 4700pF, $\pm$ 10%
C607	24550223	PF, 0.022 $\mu$ F, 63V
C608	24550223	PF, 0.022 $\mu$ F, 63V
C609	24206010	EL, 1 $\mu$ F, 50V
C610	24206479	EL, 4.7 $\mu$ F, 50V
C611	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C613	24206479	EL, 4.7 $\mu$ F, 50V
C614	24206229	EL, 2.2 $\mu$ F, 50V
C615	24206479	EL, 4.7 $\mu$ F, 50V
C616	24206229	EL, 2.2 $\mu$ F, 50V
C617	24206479	EL, 4.7 $\mu$ F, 50V
C618	24206479	EL, 4.7 $\mu$ F, 50V
C619	24203470	EL, 47 $\mu$ F, 16V
C620	24591682	PF, 6800pF
C621	24550124	PF, 0.12 $\mu$ F, 63V
C622	24591682	PF, 6800pF
C623	24550124	PF, 0.12 $\mu$ F, 63V
C624	24636100	EL, 10 $\mu$ F, 50V
C625	24203470	EL, 47 $\mu$ F, 16V
C627	24636100	EL, 10 $\mu$ F, 50V
C628	24591222	PF, 2200pF
C629	24591222	PF, 2200pF
C630	24206229	EL, 2.2 $\mu$ F, 50V
C631	24206229	EL, 2.2 $\mu$ F, 50V
C632	24795222	EL, 2200 $\mu$ F, 25V
C633	24795222	EL, 2200 $\mu$ F, 25V
C634	24591473	PF, 0.047 $\mu$ F

Location No.	Part No.	Description
C635	24591473	PF, 0.047 $\mu$ F
C636	24206339	EL, 3.3 $\mu$ F, 50V
C637	24206339	EL, 3.3 $\mu$ F, 50V
C638	24795102	EL, 1000 $\mu$ F, 25V
C640	24795470	EL, 47 $\mu$ F, 25V
C641	24795470	EL, 47 $\mu$ F, 25V
C642	24795101	EL, 100 $\mu$ F, 25V
C643	24795101	EL, 100 $\mu$ F, 25V
C644	24795101	EL, 100 $\mu$ F, 25V
C645	24550683	PF, 0.063 $\mu$ F, 63V
C646	24550683	PF, 0.063 $\mu$ F, 63V
△ C801	24098999	PF, 0.1 $\mu$ F, $\pm$ 20%, AC250V
C803(U801)	24094906	CD, 4700pF, +80%, -20%, AC250V
△ C803(U902)	24098999	PF, 0.1 $\mu$ F, $\pm$ 20%, AC250V
C804	24094906	CD, 4700pF, +80%, -20%, AC250V
C805	24094906	CD, 4700pF, +80%, -20%, AC250V
C806	24094906	CD, 4700pF, +80%, -20%, AC250V
△ C810	24086948	EL, 120 $\mu$ F, 400V
C811	24442391	CD, 390pF, $\pm$ 10%, 2kV
C814	24797101	EL, 100 $\mu$ F, 50V
C815	24591223	PF, 0.022 $\mu$ F
C816	24820103	PF, 0.01 $\mu$ F, 630V
C817	24442561	CD, 560pF, $\pm$ 10%, 2kV
C818	24798220	EL, 22 $\mu$ F, 100V
C819	24214331	CD, 330pF, $\pm$ 10%, 500V
C822	24212681	CD, 680pF, $\pm$ 10%
C823	24633100	EL, 10 $\mu$ F, 16V
C830	24215181	CD, 180pF, $\pm$ 10%, 1kV
C831	24086953	EL, 220 $\mu$ F, $\pm$ 20%, 160V
C832	24795222	EL, 2200 $\mu$ F, 25V
C841	24214181	CD, 180pF, $\pm$ 10%, 500V
C842	24795222	EL, 2200 $\mu$ F, 25V
C843	24795222	EL, 2200 $\mu$ F, 25V
C844	24204470	EL, 47 $\mu$ F, 25V
C845	24633100	EL, 10 $\mu$ F, 16V
C846	24798470	EL, 47 $\mu$ F, 100V
C847	24636100	EL, 10 $\mu$ F, 50V
C861	24820683	PF, 0.068 $\mu$ F, 630V
C862	24442331	CD, 330pF, $\pm$ 10%, 2kV
C863	24550683	PF, 0.068 $\mu$ F, 63V
C864	24797101	EL, 100 $\mu$ F, 50V
C866	24797470	EL, 47 $\mu$ F, 50V
C867	24442561	CD, 560pF, $\pm$ 10%, 2kV
C868	24212102	CD, 1000pF, $\pm$ 10%
C869	24636100	EL, 10 $\mu$ F, 50V
△ C881	24094655	CD, 1000pF, $\pm$ 20%, AC400V
△ C882	24094655	CD, 1000pF, $\pm$ 20%, AC400V
△ C883	24094655	CD, 1000pF, $\pm$ 20%, AC400V
△ C884	24094655	CD, 1000pF, $\pm$ 20%, AC400V
C901	24644010	EL, 1 $\mu$ F, 250V
C902	24095981	PF, 2200pF, 1600V
CA01	24794470	EL, 47 $\mu$ F, 16V
CA02	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CA03	24203100	EL, 10 $\mu$ F, 16V
CA04	24436300	CD, 30pF
CA05	24436300	CD, 30pF
CA06	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CA07	24203100	EL, 10 $\mu$ F, 16V
CA08	24636100	EL, 10 $\mu$ F, 50V
CA09	24436391	CD, 390pF

Location No.	Part No.	Description
CA10	24436221	CD, 220pF
CA11	24550104	PF, 0.1 $\mu$ F, 63V
CA12	24550104	PF, 0.1 $\mu$ F, 63V
CA14	24206479	EL, 4.7 $\mu$ F, 50V
CA15	24797220	EL, 22 $\mu$ F, 50V
CA16	24636100	EL, 10 $\mu$ F, 50V
CA17	24550104	PF, 0.1 $\mu$ F, 63V
CA18	24206229	EL, 2.2 $\mu$ F, 50V
CA19	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CA22	24432561	CD, 560pF, $\pm$ 10%
CA23	24212222	CD, 2200pF, $\pm$ 10%
CA25	24206010	EL, 1 $\mu$ F, 50V
CA28	24212102	CD, 1000pF, $\pm$ 10%
CA29	24432101	CD, 100pF, $\pm$ 10%
CA30	24432101	CD, 100pF, $\pm$ 10%
CA31	24432101	CD, 100pF, $\pm$ 10%
CA32	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CA33	24432101	CD, 100pF, $\pm$ 10%
CA35	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CA36	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CA37	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CA38	24636100	EL, 10 $\mu$ F, 50V
CA40	24212102	CD, 1000pF, $\pm$ 10%
CB01	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CB02	24436101	CD, 100pF
CB03	24436101	CD, 100pF
CE11	24636100	EL, 10 $\mu$ F, 50V
CE12	24206010	EL, 1 $\mu$ F, 50V
CE14	24206478	EL, 0.47 $\mu$ F, 50V
CE15	24633100	EL, 10 $\mu$ F, 16V
CE16	24550224	PF, 0.22 $\mu$ F, 63V
CE17	24085991	EL, 1 $\mu$ F, $\pm$ 20%, 25V, Non-Polar
CH01	24206010	EL, 1 $\mu$ F, 50V
CH02	24206010	EL, 1 $\mu$ F, 50V
CH03	24206010	EL, 1 $\mu$ F, 50V
CH04	24794471	EL, 470 $\mu$ F, 16V
CH05	24206229	EL, 2.2 $\mu$ F, 50V
CH06	24636100	EL, 10 $\mu$ F, 50V
CH07	24794471	EL, 470 $\mu$ F, 16V
CH08	24636100	EL, 10 $\mu$ F, 50V
CH09	24636100	EL, 10 $\mu$ F, 50V
CH10	24636100	EL, 10 $\mu$ F, 50V
CH11	24206229	EL, 2.2 $\mu$ F, 50V
CH75	24206010	EL, 1 $\mu$ F, 50V
CH78	24206010	EL, 1 $\mu$ F, 50V
CH84	24206229	EL, 2.2 $\mu$ F, 50V
CK01	24501222	PF, 2200pF
CK02	24550683	PF, 0.068 $\mu$ F, 63V
CK03	24633100	EL, 10 $\mu$ F, 16V
CK04	24633330	EL, 33 $\mu$ F, 16V
CK05	24633100	EL, 10 $\mu$ F, 16V
CK06	24794101	EL, 100 $\mu$ F, 16V
CK07	24593222	PF, 2200pF
CM01	24436201	CD, 200pF
CM02	24436201	CD, 200pF
CM03	24340080	CD, 8pF, $\pm$ 0.25pF
CM04	24340080	CD, 8pF, $\pm$ 0.25pF
CM05	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CM06	24357270	CD, 27pF
CM07	24593273	PF, 0.027 $\mu$ F
CM08	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CN11	24353240	CD, 24pF
CN12	24232103	CD, 0.01 $\mu$ F, +80%, -20%

Location No.	Part No.	Description
CN13	24353220	CD, 22pF
CN14	24795101	EL, 100 $\mu$ F, 25V
CN15	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CN16	24353220	CD, 22pF
CN17	24353220	CD, 22pF
CN18	24206010	EL, 1 $\mu$ F, 50V
CN51	24094959	Variable Capacitor, 2 to 12pF, 50V
CN52	24094959	Variable Capacitor, 2 to 12pF, 50V
CV01	24206479	EL, 4.7 $\mu$ F, 50V
CV02	24636100	EL, 10 $\mu$ F, 50V
CV03	24636100	EL, 10 $\mu$ F, 50V
CV04	24636100	EL, 10 $\mu$ F, 50V
CV05	24206010	EL, 1 $\mu$ F, 50V
CV06	24206010	EL, 1 $\mu$ F, 50V
CV07	24206010	EL, 1 $\mu$ F, 50V
CV08	24636100	EL, 10 $\mu$ F, 50V
CV09	24636100	EL, 10 $\mu$ F, 50V
CV10	24636100	EL, 10 $\mu$ F, 50V
CV11	24206479	EL, 4.7 $\mu$ F, 50V
CX02	24550104	PF, 0.1 $\mu$ F, 63V
CX03	24550104	PF, 0.1 $\mu$ F, 63V
CX04	24550104	PF, 0.1 $\mu$ F, 63V
<b>RESISTORS</b>		
R101	24366222	CF, 2200 ohm
R103	24366392	CF, 3900 ohm
R104	24366221	CF, 220 ohm
R105	24366104	CF, 100k ohm
R106	24360185	CF, 1.8M ohm, 1/8W
R107	24366222	CF, 2200 ohm
R108	24366332	CF, 3300 ohm
R109	24366684	CF, 680k ohm
R110	24366562	CF, 5600 ohm
R111	24366271	CF, 270 ohm
R112	24366331	CF, 330 ohm
R113	24366184	CF, 180k ohm
R114	24366101	CF, 100 ohm
△ R115	24552151	OMF, 150 ohm, 1/2W
R117	24366101	CF, 100 ohm
R118	24366332	CF, 3300 ohm
R119	24366102	CF, 1k ohm
R120	24366562	CF, 5600 ohm
R121	24366332	CF, 3300 ohm
R122	24366152	CF, 1500 ohm
R123	24366391	CF, 390 ohm
R124	24366223	CF, 22k ohm
R125	24366334	CF, 330k ohm
R126	24366122	CF, 1200 ohm
R127	24366153	CF, 15k ohm
R128	24366222	CF, 2200 ohm
R130	24366332	CF, 3300 ohm
R151	24066952	VR, 10k ohm, 1/10W
R152	24066946	VR, 1M ohm, 1/10W
R153	24066953	VR, 5k ohm, 1/10W
R161	24366331	CF, 330 ohm
R162	24366102	CF, 1k ohm
R163	24366682	CF, 6800 ohm
△ R164	24552101	OMF, 100 ohm, 1/2W
R166	24366390	CF, 39 ohm
R167	24366680	CF, 68 ohm
R168	24366562	CF, 5600 ohm
R173	24366102	CF, 1k ohm

Location No.	Part No.	Description
R202	24366182	CF, 1800 ohm
R203	24366471	CF, 470 ohm
R207	24366102	CF, 1k ohm
R208	24366101	CF, 100 ohm
R209	24366103	CF, 10k ohm
R210	24366203	CF, 20k ohm
R211	24366622	CF, 6200 ohm
R212	24366103	CF, 10k ohm
R213	24366101	CF, 100 ohm
R214	24366182	CF, 1800 ohm
R216	24366133	CF, 13k ohm
R218	24366222	CF, 2200 ohm
R219	24366103	CF, 10k ohm
R220	24366202	CF, 2k ohm
R221	24366822	CF, 8200 ohm
R225	24366103	CF, 10k ohm
R241	24366753	CF, 75k ohm
R243	24366683	CF, 68k ohm
R252	24061591	VR, 2k ohm, 1/8W
R253	24061591	VR, 2k ohm, 1/8W
R255	24061577	VR, 10k ohm, 1/8W
R301	24366301	CF, 300 ohm
R302	24366244	CF, 240k ohm
R303	24366303	CF, 30k ohm
R304	24366102	CF, 1k ohm
R305	24366161	CF, 160 ohm
R306	24366333	CF, 33k ohm
R307	24366133	CF, 13k ohm
R308	24366434	CF, 430k ohm
△ R311	24552242	OMF, 2400 ohm, 1/2W
R312	24366223	CF, 22k ohm
R313	24366274	CF, 270k ohm
R318	24366102	CF, 1k ohm
R319	24366621	CF, 620 ohm
R320	24366102	CF, 1k ohm
△ R321	24381102	OMF, 1k ohm, 1/2W
△ R322	24552102	OMF, 1k ohm, 1/2W
△ R323	24322129	OMF, 1.2 ohm, 1W
R324	24366203	CF, 20k ohm
△ R327	24532100	FR, 10 ohm, 1W
△ R340	24552122	OMF, 1200 ohm, 1/2W
△ R341	24552122	OMF, 1200 ohm, 1/2W
△ R342	24552152	OMF, 1500 ohm, 1/2W
R351	24061574	VR, 100k ohm, 1/8W
△ R361	24383102	OMF, 1k ohm, 2W
R403	24366162	CF, 1600 ohm
R405	24366511	CF, 510 ohm
R407	24366201	CF, 200 ohm
R408	24366302	CF, 3k ohm
△ R410	24552432	OMF, 4300 ohm, 1/2W
R411	24366391	CF, 390 ohm
R412	24366121	CF, 120 ohm
△ R413	24384822	OMF, 8200 ohm, 3W
△ R416	24384272	OMF, 2700 ohm, 3W
△ R420	24553102	OMF, 1k ohm, 1W
△ R421	24553102	OMF, 1k ohm, 1W
△ R423	24552221	OMF, 220 ohm, 1/2W
R440	24376103	CF, 10k ohm, 1/2W
R441	24376103	CF, 10k ohm, 1/2W
△ R444	24007583	Cement, 5.6 ohm, 5.5W
△ R445	24047100	Cement, 10 ohm, 15W
△ R447	24007649	Cement, 20 ohm, 3W
△ R448	24547249	FR, 2.4 ohm, 1W
R502	24366334	CF, 330k ohm

Location No.	Part No.	Description
R503	24366202	CF, 2k ohm
R504	24366391	CF, 390 ohm
R505	24366822	CF, 8200 ohm
R506	24366561	CF, 560 ohm
R507	24366822	CF, 8200 ohm
R508	24366561	CF, 560 ohm
R509	24366203	CF, 20k ohm
R511	24366562	CF, 5600 ohm
R512	24366152	CF, 1500 ohm
R513	24366152	CF, 1500 ohm
R514	24366562	CF, 5600 ohm
R515	24366221	CF, 220 ohm
R516	24366221	CF, 220 ohm
R517	24366221	CF, 220 ohm
R520	24366103	CF, 10k ohm
R521	24366102	CF, 1k ohm
R522	24366102	CF, 1k ohm
R523	24366472	CF, 4700 ohm
R524	24366473	CF, 47k ohm
R525	24366473	CF, 47k ohm
R526	24366332	CF, 3300 ohm
R527	24945475	CC, 4.7M ohm, $\pm 10\%$ , 1/4W
R529	24366273	CF, 27k ohm
R531	24366102	CF, 1k ohm
R532	24366302	CF, 3k ohm
R533	24366132	CF, 1300 ohm
R534	24376104	CF, 100k ohm, 1/2W
R535	24366302	CF, 3k ohm
R536	24376104	CF, 100k ohm, 1/2W
R537	24366132	CF, 1300 ohm
R538	24366302	CF, 3k ohm
R539	24366132	CF, 1300 ohm
R540	24376104	CF, 100k ohm, 1/2W
R541	24366821	CF, 820 ohm
R542	24366271	CF, 270 ohm
R543	24366512	CF, 5100 ohm
R544	24366101	CF, 100 ohm
R545	24366101	CF, 100 ohm
R547	24366471	CF, 470 ohm
R548	24366471	CF, 470 ohm
R549	24366471	CF, 470 ohm
R551	24066955	VR, 1k ohm, 1/10W
R557	24061591	VR, 2k ohm, 1/8W
R558	24061591	VR, 2k ohm, 1/8W
R559	24061591	VR, 2k ohm, 1/8W
R560	24366912	CF, 9100 ohm
R561	24366912	CF, 9100 ohm
R562	24366912	CF, 9100 ohm
R563	24366104	CF, 100k ohm
R564	24366101	CF, 100 ohm
R565	24366101	CF, 100 ohm
R566	24366101	CF, 100 ohm
△ R591	24383153	OMF, 15k ohm, 2W
△ R592	24383153	OMF, 15k ohm, 2W
△ R593	24383153	OMF, 15k ohm, 2W
R601	24366151	CF, 150 ohm
R602	24366102	CF, 1k ohm
R603	24366102	CF, 1k ohm
R604	24366103	CF, 10k ohm
R606	24366272	CF, 2700 ohm
R607	24366473	CF, 47k ohm
R608	24366103	CF, 10k ohm
R609	24366271	CF, 270 ohm



Location No.	Part No.	Description
R612	24366124	CF, 120k ohm
R613	24366102	CF, 1k ohm
R614	24366242	CF, 2400 ohm
R615	24366124	CF, 120k ohm
R616	24366124	CF, 120k ohm
R617	24366124	CF, 120k ohm
R618	24366472	CF, 4700 ohm
R619	24366122	CF, 1200 ohm
R620	24366103	CF, 10k ohm
R621	24366122	CF, 1200 ohm
R622	24366122	CF, 1200 ohm
R624	24366154	CF, 150k ohm
R625	24366154	CF, 150k ohm
R626	24366472	CF, 4700 ohm
R627	24366472	CF, 4700 ohm
R628	24366103	CF, 10k ohm
R629	24366103	CF, 10k ohm
R630	24366562	CF, 5600 ohm
R631	24366562	CF, 5600 ohm
△ R632	24322398	OMF, 0.39 ohm, 1W
△ R633	24321229	OMF, 2.2 ohm, 1/2W
R635	24366472	CF, 4700 ohm
R636	24366472	CF, 4700 ohm
R637	24366391	CF, 390 ohm
△ R638	24321229	OMF, 2.2 ohm, 1/2W
R640	24366391	CF, 390 ohm
R641	24366562	CF, 5600 ohm
R642	24366562	CF, 5600 ohm
R643	24366103	CF, 10k ohm
R645	24366103	CF, 10k ohm
R646	24366473	CF, 47k ohm
R647	24366103	CF, 10k ohm
R648	24366473	CF, 47k ohm
R661	24946101	CC, 100 ohm, $\pm 10\%$ , 1/2W
R662	24946101	CC, 100 ohm, $\pm 10\%$ , 1/2W
△ R801	24007613	Cement, 12 ohm, 7W
△ R802	24007613	Cement, 12 ohm, 7W
△ R810	24000838	FR, 0.33 ohm, $\pm 10\%$ , 2W
R811	24377224	CF, 220k ohm, 1W
△ R812	24322689	OMF, 6.8 ohm, 1W
△ R813	24009945	OMF, 47 ohm, 2W
R814	24366681	CF, 680 ohm
△ R815	24321479	OMF, 4.7 ohm, 1/2W
R816	24366102	CF, 1k ohm
△ R817	24384683	OMF, 68k ohm, 3W
R818	24366561	CF, 560 ohm
R822	24378203	CF, 20k ohm, $\pm 2\%$ , 1/8W
R825	24366563	CF, 56k ohm
△ R827	24382390	OMF, 39 ohm, 1W
R828	24366822	CF, 8200 ohm
△ R833	24382333	OMF, 33k ohm, 1W
△ R840	24009944	OMF, 240 ohm, 2W
△ R841	24009944	OMF, 240 ohm, 2W
△ R842	24321109	OMF, 1 ohm, 1/2W
△ R843	24531150	FR, 15 ohm, 1/2W
R844	24366152	CF, 1500 ohm
R845	24366102	CF, 1k ohm
R846	24366472	CF, 4700 ohm
△ R847	24383821	OMF, 820 ohm, 2W
R848	24366330	CF, 33 ohm
R860	24942565	CC, 5.6M ohm, 1/2W
△ R861	24383134	OMF, 130k ohm, 2W
△ R863	24383134	OMF, 130k ohm, 2W
△ R864	24321229	OMF, 2.2 ohm, 1/2W

Location No.	Part No.	Description
△ R865	24382681	OMF, 680 ohm, 1W
△ R866	24382150	OMF, 15 ohm, 1W
R867	24366681	CF, 680 ohm
R868	24366102	CF, 1k ohm
R869	24366681	CF, 680 ohm
△ R870	24383470	OMF, 47 ohm, 2W
△ R872	24552102	OMF, 1k ohm, 1/2W
△ R873	24000919	FR, 1 ohm, 2W
R874	24377224	CF, 220k ohm, 1W
△ R890	24000816	PTC Thermistor, Dual
R901	24946272	CC, 2700 ohm, $\pm 10\%$ , 1/2W
R902	24946272	CC, 2700 ohm, $\pm 10\%$ , 1/2W
R903	24946272	CC, 2700 ohm, $\pm 10\%$ , 1/2W
△ R920	24000945	FR, 1.8 ohm, 2W
RA01	24366472	CF, 4700 ohm
RA02	24366123	CF, 12k ohm
RA03	24366562	CF, 5600 ohm
RA04	24366103	CF, 10k ohm
RA05	24366103	CF, 10k ohm
RA06	24366102	CF, 1k ohm
RA07	24366102	CF, 1k ohm
RA08	24366102	CF, 1k ohm
RA09	24366102	CF, 1k ohm
RA10	24366102	CF, 1k ohm
RA11	24366102	CF, 1k ohm
RA12	24366102	CF, 1k ohm
RA13	24366102	CF, 1k ohm
RA14	24366103	CF, 10k ohm
RA15	24366103	CF, 10k ohm
RA16	24890102	CF, 1k ohm, 1/4W
RA17	24366102	CF, 1k ohm
RA18	24366102	CF, 1k ohm
RA19	24366103	CF, 10k ohm
RA20	24366182	CF, 1800 ohm
RA21	24366392	CF, 3900 ohm
RA22	24366911	CF, 910 ohm
RA23	24366432	CF, 4300 ohm
RA26	24366104	CF, 100k ohm
RA28	24366473	CF, 47k ohm
RA29	24366434	CF, 430k ohm
RA30	24366223	CF, 22k ohm
RA31	24366103	CF, 10k ohm
RA32	24366102	CF, 1k ohm
RA36	24366473	CF, 47k ohm
RA39	24366163	CF, 16k ohm
RA40	24366102	CF, 1k ohm
RA41	24366102	CF, 1k ohm
RA43	24366223	CF, 22k ohm
RA44	24366102	CF, 1k ohm
RA46	24366102	CF, 1k ohm
RA47	24366102	CF, 1k ohm
RA48	24366102	CF, 1k ohm
RA49	24366102	CF, 1k ohm
△ RA53	24383183	OMF, 18k ohm, 2W
RA54	24366102	CF, 1k ohm
RA55	24366223	CF, 22k ohm
RA56	24366333	CF, 33k ohm
RA57	24366333	CF, 33k ohm
RA58	24366333	CF, 33k ohm
RA59	24366333	CF, 33k ohm
RA60	24366102	CF, 1k ohm
RA61	24366102	CF, 1k ohm
RA62	24366102	CF, 1k ohm
RA63	24366102	CF, 1k ohm

Location No.	Part No.	Description
RA67	24366273	CF, 27k ohm
RA69	24366102	CF, 1k ohm
RA70	24366104	CF, 100k ohm
RA71	24366104	CF, 100k ohm
RA72	24366223	CF, 22k ohm
RA73	24366104	CF, 100k ohm
RA74	24366221	CF, 220 ohm
RA75	24366473	CF, 47k ohm
RA76	24366682	CF, 6800 ohm
RA77	24366133	CF, 13k ohm
RA78	24366473	CF, 47k ohm
RA79	24366473	CF, 47k ohm
RA80	24366272	CF, 2700 ohm
RA81	24366103	CF, 10k ohm
RA82	24366431	CF, 430 ohm
RA92	24890225	CF, 2.2M ohm, 1/4W
△ RA97	24383163	OMF, 16k ohm, 2W
RA98	24366102	CF, 1k ohm
RB01	24366472	CF, 4700 ohm
RB02	24366302	CF, 3k ohm
RB03	24366103	CF, 10k ohm
RB04	24366103	CF, 10k ohm
RB05	24366302	CF, 3k ohm
RB06	24366562	CF, 5600 ohm
RE11	24366562	CF, 5600 ohm
RE12	24366392	CF, 3900 ohm
RE35	24366222	CF, 2200 ohm
RE36	24366823	CF, 82k ohm
RE37	24366823	CF, 82k ohm
RE38	24366563	CF, 56k ohm
RE39	24366202	CF, 2k ohm
RE40	24366123	CF, 12k ohm
RE41	24366133	CF, 13k ohm
RE42	24366472	CF, 4700 ohm
RE43	24366563	CF, 56k ohm
RH01	24366750	CF, 75 ohm
RH02	24366473	CF, 47k ohm
RH03	24366473	CF, 47k ohm
RH04	24366102	CF, 1k ohm
RH05	24366102	CF, 1k ohm
RH06	24366750	CF, 75 ohm
RH07	24366750	CF, 75 ohm
RH08	24366750	CF, 75 ohm
RH09	24366750	CF, 75 ohm
RH10	24366820	CF, 82 ohm
RH11	24366102	CF, 1k ohm
RH12	24366122	CF, 1200 ohm
RH13	24366101	CF, 100 ohm
RH14	24366101	CF, 100 ohm
RH15	24366101	CF, 100 ohm
RH16	24366101	CF, 100 ohm
RH52	24069635	VR, 5k ohm, 1/10W, CC
RH53	24066951	VR, 20k ohm, 1/10W
RH72	24366102	CF, 1k ohm
RH73	24366102	CF, 1k ohm
RH80	24366820	CF, 82 ohm
RH82	24366473	CF, 47k ohm
RH83	24366473	CF, 47k ohm
RH84	24366472	CF, 4700 ohm
RH85	24366750	CF, 75 ohm
RH88	24366122	CF, 1200 ohm
RH89	24366102	CF, 1k ohm
RK01	24366223	CF, 22k ohm
RK02	24366562	CF, 5600 ohm

Location No.	Part No.	Description
RK03	24366220	CF, 22 ohm
RK04	24366222	CF, 2200 ohm
△ RK05	24552470	OMF, 47 ohm, 1/2W
RM03	24366272	CF, 2700 ohm
RM04	24366432	CF, 4300 ohm
RM05	24366221	CF, 220 ohm
RM06	24945475	CC, 4.7M ohm, $\pm 10\%$ , 1/4W
RN11	24366473	CF, 47k ohm
RN14	24366152	CF, 1500 ohm
RN15	24366103	CF, 10k ohm
RN16	24366473	CF, 47k ohm
RN17	24366152	CF, 1500 ohm
RN18	24366103	CF, 10k ohm
RN19	24366103	CF, 10k ohm
RN20	24366562	CF, 5600 ohm
RN21	24366562	CF, 5600 ohm
RN22	24366152	CF, 1500 ohm
RN23	24366472	CF, 4700 ohm
RN24	24366472	CF, 4700 ohm
RN25	24366472	CF, 4700 ohm
RN26	24366472	CF, 4700 ohm
RN33	24366223	CF, 22k ohm
RR02	24366222	CF, 2200 ohm
RR81	24366332	CF, 3300 ohm
RV01	24366223	CF, 22k ohm
RV02	24366223	CF, 22k ohm
RV03	24366224	CF, 220k ohm
RV04	24366103	CF, 10k ohm
△ RV05	24552151	OMF, 150 ohm, 1/2W
RV06	24366103	CF, 10k ohm
RV07	24366103	CF, 10k ohm
RV08	24366391	CF, 390 ohm
RV09	24366561	CF, 560 ohm
RV10	24366103	CF, 10k ohm
RV11	24366332	CF, 3300 ohm
RV12	24366102	CF, 1k ohm
RV13	24366152	CF, 1500 ohm
RV14	24366103	CF, 10k ohm
RV15	24366103	CF, 10k ohm
RV17	24366112	CF, 1100 ohm
RV18	24366102	CF, 1k ohm
RV19	24366224	CF, 220k ohm
RV20	24366224	CF, 220k ohm
RV21	24366101	CF, 100 ohm
RV22	24366101	CF, 100 ohm
RV23	24366102	CF, 1k ohm
RV24	24366102	CF, 1k ohm
RV25	24366104	CF, 100k ohm
RV26	24366104	CF, 100k ohm
RV27	24366332	CF, 3300 ohm
△ RV28	24552271	OMF, 270 ohm, 1/2W
RV29	24366330	CF, 33 ohm
RV30	24366822	CF, 8200 ohm
RV31	24366103	CF, 10k ohm
RV32	24366392	CF, 3900 ohm
RV33	24366392	CF, 3900 ohm
RV34	24366392	CF, 3900 ohm
RV35	24366392	CF, 3900 ohm
RV36	24366392	CF, 3900 ohm
RV37	24366821	CF, 820 ohm
RV38	24366821	CF, 820 ohm
RV39	24366821	CF, 820 ohm
RV40	24366332	CF, 3300 ohm
RV41	24366102	CF, 1k ohm

Location No.	Part No.	Description
RV42	24366471	CF, 470 ohm
RV43	24366682	CF, 6800 ohm
RV45	24366103	CF, 10k ohm
RV46	24366103	CF, 10k ohm
RV47	24366152	CF, 1500 ohm
RV48	24366472	CF, 4700 ohm
RV49	24366153	CF, 15k ohm
RX02	24366102	CF, 1k ohm
RX05	24366101	CF, 100 ohm
RX08	24366101	CF, 100 ohm
RX10	24366101	CF, 100 ohm
RX13	24366102	CF, 1k ohm
<b>COILS &amp; TRANSFORMERS</b>		
L102	23262819	Coil, PIF, TRF1071
L103	23261051	Coil, RF Choke, AZ9246E
L106	23261051	Coil, RF Choke, AZ9246E
L107	23238920	Coil, Peaking, TRF4150AC
L108	23238928	Coil, Peaking, TRF4339AC
L151	23262813	Coil, IF Coil, TRF1077
L152	23262813	Coil, IF Coil, TRF1077
L162	23221047	Coil, RF Choke, TRF9201
L203	23237973	Coil, Peaking, TRF4151AC
L204	23238916	Coil, Peaking, TRF4330AC
L311	23261974	Coil (Ferrite Bead), HC5-035
L406	23103940	Coil (Ferrite Bead), TEM2001
△ L411	23222657	Coil, Linearity, TLN2072
△ L462	23227483	Deflection Yoke, AT6035-OO
L501	23238918	Coil, Peaking, TRF4220AC
L503	23237987	Coil, Peaking, TRF4100AC
L551	23250972	Coil, 1H-Delay Matching, TRF5418
L601	23261986	Coil, RF Choke, TRF9220
L602	23262841	Coil, PIF, TRF1057
L603	23238928	Coil, Peaking, TRF4339AC
L605	23238921	Coil, Peaking, TRF4120AC
L651	23262813	Coil, IF Coil, TRF1077
L652	23232942	Coil, Variable, TRF3077
L802	23103940	Coil (Ferrite Bead), TEM2001
L803	23103940	Coil (Ferrite Bead), TEM2001
L830	23261975	Coil, Choke, TRF9229
L831	23221060	Coil, RF Choke, TLN1015E
L841	23103940	Coil (Ferrite Bead), TEM2001
L842	23222694	Coil, Width, TLN2026
L861	23103940	Coil (Ferrite Bead), TEM2001
L862	23103940	Coil (Ferrite Bead), TEM2001
△ L901	23200779	Coil, Degaussing, TSB-2231
LA01	23237999	Coil, Peaking, TRF4109AC
LB01	23262778	Coil, IF Coil, TRF1112
LK01	23232963	Coil, Variable, TRF3055
LK02	23238722	Coil, Peaking, TRF4822AI
LM01	23262797	Coil, IF Coil, TRF1093
LM02	23272988	Coil, Chrome Demod, TRF5414
LM03	23272988	Coil, Chrome Demod, TRF5414
LM04	23262798	Coil, IF Coil, TRF1092
△ T401	23224983	Transformer, Horiz. Drive, TLN1039
△ T461	23236058	Transformer, Converter, TFB4059AD
T801	23211925	Line Filter, TRF3128

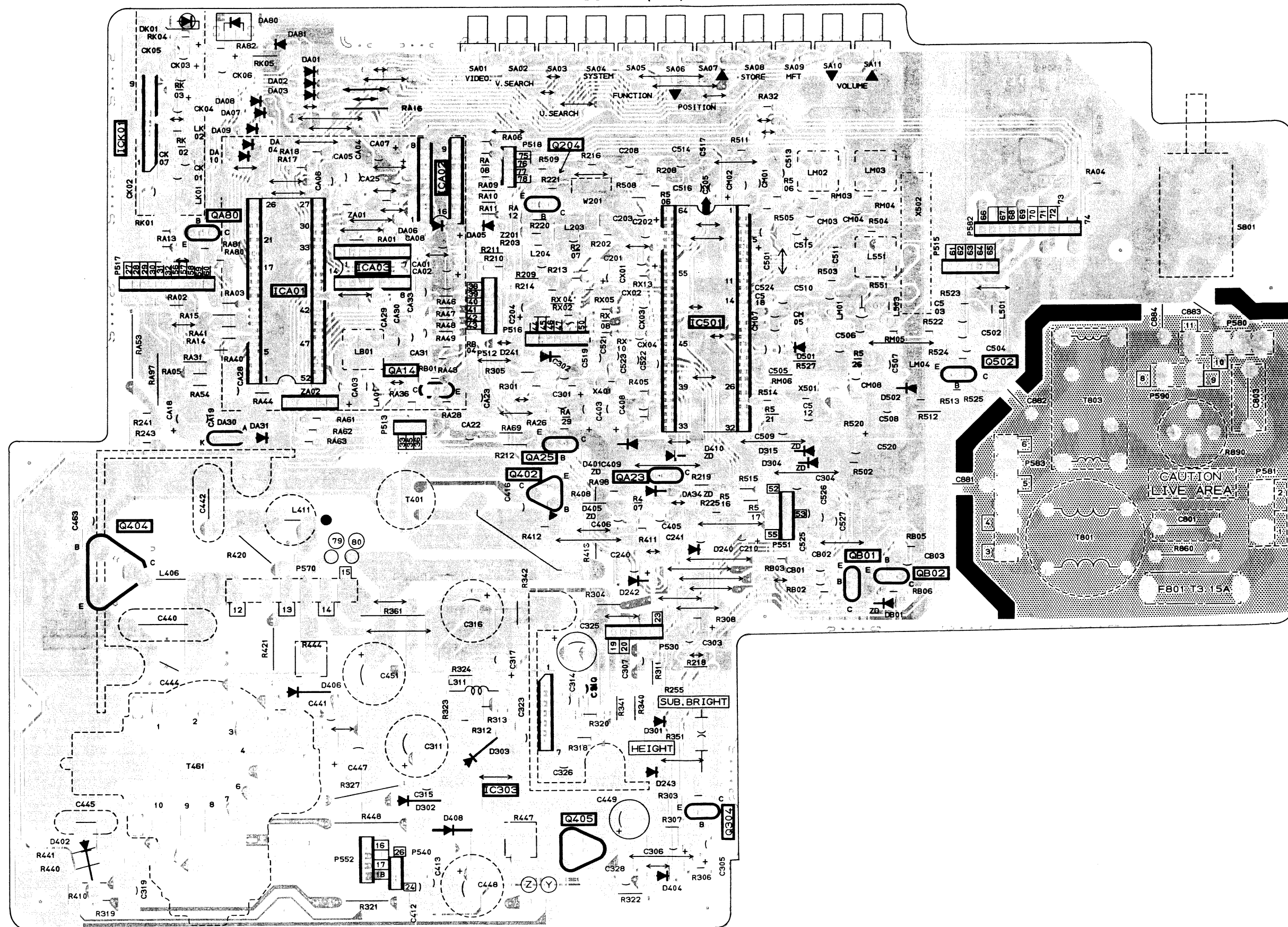
Location No.	Part No.	Description
△ T802	23213673	Transformer, Converter, TPW3079
△ T803	23213658	Transformer, Converter, TPW3087
T804	23211967	Line Filter, TRF3113
<b>SEMICONDUCTORS</b>		
IC101	23318286	IC, M51419SP
IC303	23119548	IC, AN5515
IC405	23318218	IC, $\mu$ PC7812H
IC501	B0379470	IC, TA8659N
IC601	23118328	IC, TDA2460
IC602	B0356190	IC, TA7630P
IC606	23118327	IC, AN7178
ICA01	23318233	IC, M50436-588
ICA02	23119182	IC, PD6336C
ICA03	23119101	IC, M58655P
ICA04	23119441	IC, LA7910
ICA06	B0349250	IC, TA75393S
ICK01	23119566	IC, $\mu$ PC1474HA
ICV01	23318193	IC, AN5855K
ICV04	23119139	IC, AN5862K
Q102	23114689	Transistor, BC547A
Q161	A6708871	Transistor, 2SC388ATM
Q171	23114689	Transistor, BC547A
Q204	23114689	Transistor, BC547A
Q303B	23035308	Screw, BTB3X8SZN
Q304	23114689	Transistor, BC547A
△ Q404	A6868706	Transistor, 2SD1427 FA-1
Q406	A671656A	Transistor, 2SC495-Y
Q502	23114689	Transistor, BC547A
Q505	23114693	Transistor, BF871
Q506	23114689	Transistor, BC547A
Q508	23114693	Transistor, BF871
Q509	23114689	Transistor, BC547A
Q511	23114693	Transistor, BF871
Q512	23114689	Transistor, BC547A
Q514	23114688	Transistor, BC327
Q515	23114689	Transistor, BC547A
Q603	23114689	Transistor, BC547A
Q604	23114689	Transistor, BC547A
Q605	23114689	Transistor, BC547A
Q606B	23035308	Screw, BTB3X8SZN
Q607	23114691	Transistor, BC557A
Q608	23114689	Transistor, BC547A
Q609	23114689	Transistor, BC547A
Q801	23314098	Transistor (STR), STR54041
Q801B	23712312	Screw, PP3X.5X12SZN
Q802	23114632	Transistor, BC547B
Q805	23314018	Transistor, 2SC3678
Q808	23114632	Transistor, BC547B
Q809	23114546	Transistor, BC557B
Q810	A6842185	Transistor, 2SD553-Y
Q811	23114546	Transistor, BC557B
Q812	23114546	Transistor, BC557B
QA05	23114689	Transistor, BC547A
QA07	23114689	Transistor, BC547A
QA13	23114689	Transistor, BC547A
QA14	23114689	Transistor, BC547A
QA15	23114689	Transistor, BC547A
QA23	23114689	Transistor, BC547A
QA25	23114691	Transistor, BC557A
QA80	23114691	Transistor, BC557A
QB01	23114689	Transistor, BC547A

Location No.	Part No.	Description
QB02	23114689	Transistor, BC547A
QE10	23114689	Transistor, BC547A
QE11	23114691	Transistor, BC557A
QN02	23114689	Transistor, BC547A
QN03	23114689	Transistor, BC547A
QR01	23114632	Transistor, BC547B
QV02	23114689	Transistor, BC547A
QV03	23114691	Transistor, BC557A
QV05	23114689	Transistor, BC547A
QV06	A6734590	Transistor, 2SC752GTM-Y
QV07	23114689	Transistor, BC547A
QV08	23114689	Transistor, BC547A
QV09	23114691	Transistor, BC557A
QV10	23114691	Transistor, BC557A
QV11	23114689	Transistor, BC547A
QV12	23114689	Transistor, BC547A
QV13	23114689	Transistor, BC547A
D240	23115599	Diode, 1N4148
D241	A7150041	Diode, 1SS104
D242	23115599	Diode, 1N4148
D243	23115599	Diode, 1N4148
D301	23115599	Diode, 1N4148
D302	23118479	Diode, BYD33J
D303	23115532	Diode, ERB12-01RK
D304	A7110410	Diode, Zener, 05Z12X
D315	A7110160	Diode, Zener, 05Z7.5Y
D401	A7110262	Diode, Zener, 05Z9.1Y
D402	23115598	Diode, 1N4003
D404	23115599	Diode, 1N4148
D405	A7110634	Diode, Zener, 05Z20Y
D406	23118479	Diode, BYD33J
D408	23118994	Diode, BYW95C
D409	A7110311	Diode, Zener, 05Z10X
D410	A7116815	Diode, Zener, 04AZ8.2Y
D501	23115599	Diode, 1N4148
D502	A7110262	Diode, Zener, 05Z9.1Y
D594	23115599	Diode, 1N4148
D595	23115599	Diode, 1N4148
D596	23115599	Diode, 1N4148
D602	23115599	Diode, 1N4148
D603	23115599	Diode, 1N4148
D604	23115599	Diode, 1N4148
D801	A7568410	Diode, TVR-4J
D802	A7568410	Diode, TVR-4J
D803	A7568410	Diode, TVR-4J
D804	A7568410	Diode, TVR-4J
D811	23118479	Diode, BYD33J
D812	23118736	Diode, BYV96E
D813	23118479	Diode, BYD33J
D815	23118479	Diode, BYD33J
D816	A7116615	Diode, Zener, 04AZ6.8Y
D820	23118736	Diode, BYV96E
D822	23118479	Diode, BYD33J
D825	23115599	Diode, 1N4148
D826	A7117315	Diode, Zener, 04AZ13Y
D827	23118479	Diode, BYD33J
D828	A7117705	Diode, Zener, 04AZ20X
D830	23118994	Diode, BYW95C
D842	23118943	Diode, ERC20-04
D843	A7116315	Diode, Zener, 04AZ5.1Y
D844	23118611	Diode, Zener, RD30ES-B3
D845	23118479	Diode, BYD33J
DA01	23115599	Diode, 1N4148
DA02	23115599	Diode, 1N4148

Location No.	Part No.	Description
DA03	23115599	Diode, 1N4148
DA04	23115599	Diode, 1N4148
DA05	23115599	Diode, 1N4148
DA06	23115599	Diode, 1N4148
DA07	23115599	Diode, 1N4148
DA08	23115599	Diode, 1N4148
DA09	23115599	Diode, 1N4148
DA10	23115599	Diode, 1N4148
DA16	23115599	Diode, 1N4148
DA17	23115599	Diode, 1N4148
DA30	23115878	Diode, Zener, $\mu$ PC574JC
DA31	23115599	Diode, 1N4148
DA33	23115599	Diode, 1N4148
DA34	A7110041	Diode, Zener, 05Z5.1Y
DA80	23118969	Diode (LED), MV57124, Red
DA81	23115599	Diode, 1N4148
DB01	A7110041	Diode, Zener, 05Z5.1Y
DE11	A7288601	Diode, 1S2186 FA-1
DE12	A7288601	Diode, 1S2186 FA-1
DE13	A7288601	Diode, 1S2186 FA-1
DK01	23118482	Diode, Photo, BPW41N
DN01	A7288601	Diode, 1S2186 FA-1
DN02	A7110040	Diode, Zener, 05Z5.1X
DN03	A7288601	Diode, 1S2186 FA-1
DN06	23115599	Diode, 1N4148
DN07	23115599	Diode, 1N4148
△ DR10	23118447	Photo Coupler, CNY75C
DV01	23115535	Diode, OA91
DV02	23115535	Diode, OA91
DV03	23115535	Diode, OA91
DV04	23115535	Diode, OA91
DV05	23115535	Diode, OA91
DV06	23115535	Diode, OA91
DV07	23115599	Diode, 1N4148
DV08	23115599	Diode, 1N4148
DV09	23115526	Diode, Zener, BZX79B5V1
DV12	23115599	Diode, 1N4148
DV13	23115599	Diode, 1N4148
DV14	23115599	Diode, 1N4148
DV15	23115599	Diode, 1N4148
DV16	23115599	Diode, 1N4148
<b>MISCELLANEOUS</b>		
△ F801	23144898	Fuse, 3.15A
F801A	23845691	Fuse, Clip
K902	23120663	Remote Hand Unit, CT-9234
P661	23363607	Headphone Jack
△ P801	23176704	Power Cord
PH01	23365025	Connector, 21Pin
PH03	23363253	Pin Jack, Red
PH04	23363252	Pin Jack, Yellow
PH06	23363254	Pin Jack, Red
PH07	23363252	Pin Jack, Yellow
PH09	23365024	Connector, EXP. Speaker
PH10	23365024	Connector, EXP. Speaker
S201	23145682	Switch, Lever, 1C3P
S202	23145542	Switch, Lever, 1C3P
△ S801	23145583	Switch, Push, 2C2P
S801B	23712306	Screw, PP3X.5X6SZN
SA01	23145435	Switch, Key, KSA-VL
SA02	23145435	Switch, Key, KSA-VL
SA03	23145435	Switch, Key, KSA-VL
SA04	23145435	Switch, Key, KSA-VL
SA05	23145435	Switch, Key, KSA-VL

Location No.	Part No.	Description

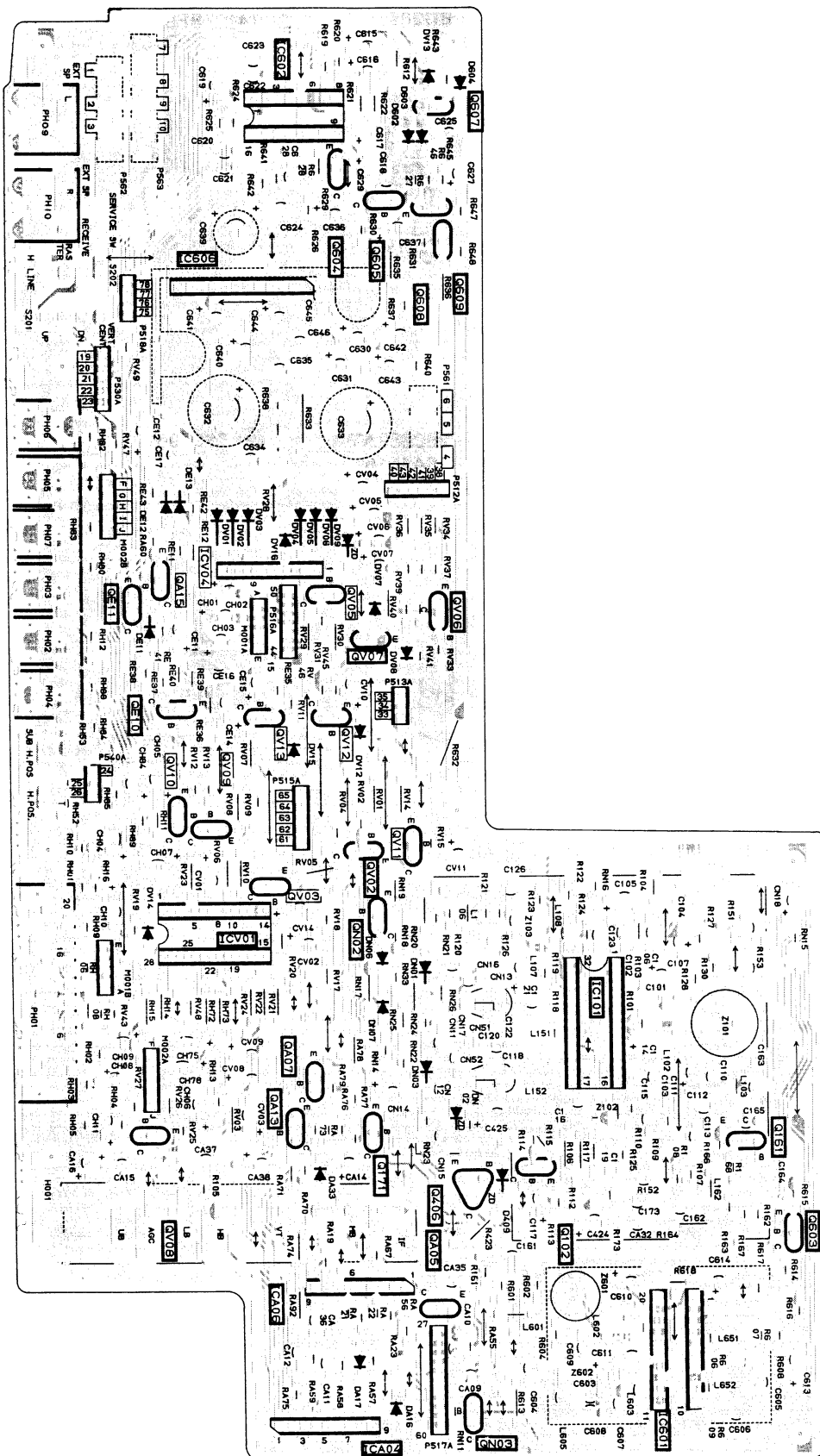
# MAIN BOARD PW6336 BOTTOM (FOIL) SIDE







**BOTTOM (FOIL) SIDE**





## TERMINAL VIEW OF TRANSISTOR

①

BC327  
BC337  
BC547A  
BC547B  
BC547C  
BC557A  
BC557B  
BF324



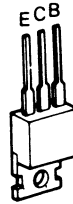
②

2SK30ATM



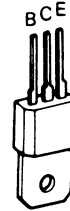
③

BD202



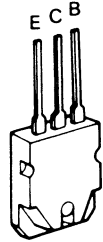
④

BF871  
2SD553



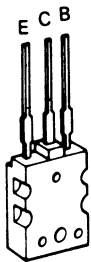
⑤

2SC3678  
2SC3182N



⑥

2SD1427



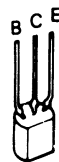
⑦

2SC752GTM



⑧

2SC388ATM  
2SA1015



⑨

2SC495



Type name  
printed

MEMO

Handwriting practice area with 25 horizontal dotted lines.

MEMO

Handwriting practice area with 25 horizontal dotted lines.

# 210R6F

## SCHEMATIC DIAGRAM (1/2)

### IMPORTANT SAFETY NOTICE

Component marked with the International Hazard Symbol must, if changed, be replaced by an approved type and must be mounted as the original. This will ensure that the safety standards adhered to during manufacture will be maintained following any servicing procedure.

### OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltage readings were obtained using a high impedance digital voltmeter.
2. (—) or ground lead of instruments should be connected to the ground marked (⊥) in the schematic on checking Non-isolated circuit surrounded by mark but should be connected to the points marked (⚡) on checking isolated circuit.
3. The voltage readings may vary as much as  $\pm 20\%$ .
4. Check that the Tuning, A.F.C., Brightness, Contrast and Colour controls are adjusted for the best picture, making sure that the Contrast, Brightness and Colour controls are set near to their mid-positions.
5. The waveforms were taken using a standard colour bar signal and were observed using a wide band oscilloscope via a low capacity probe.

### NOTES:

1. This circuit diagram is subject to change without notice.

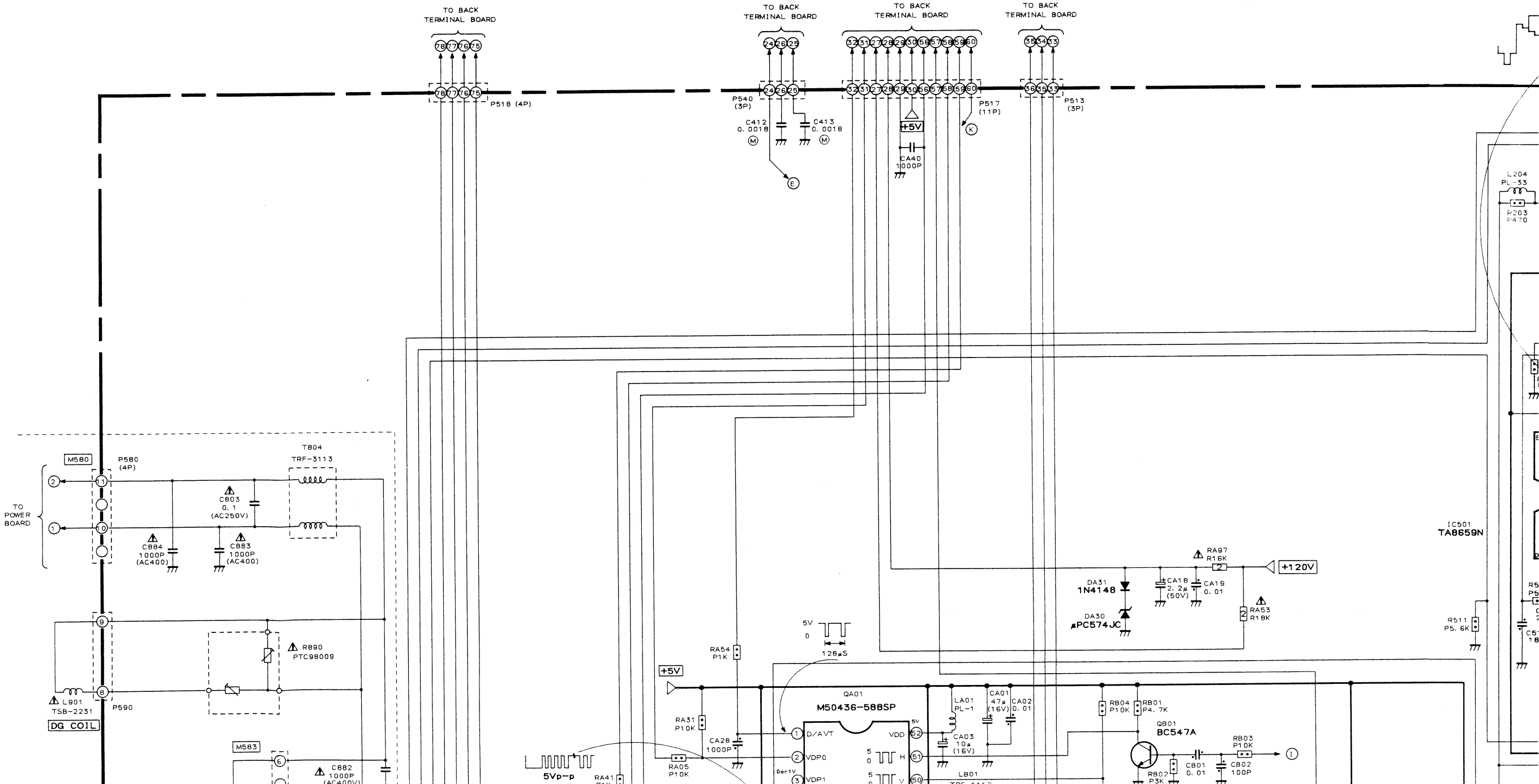
### EXPRESSION

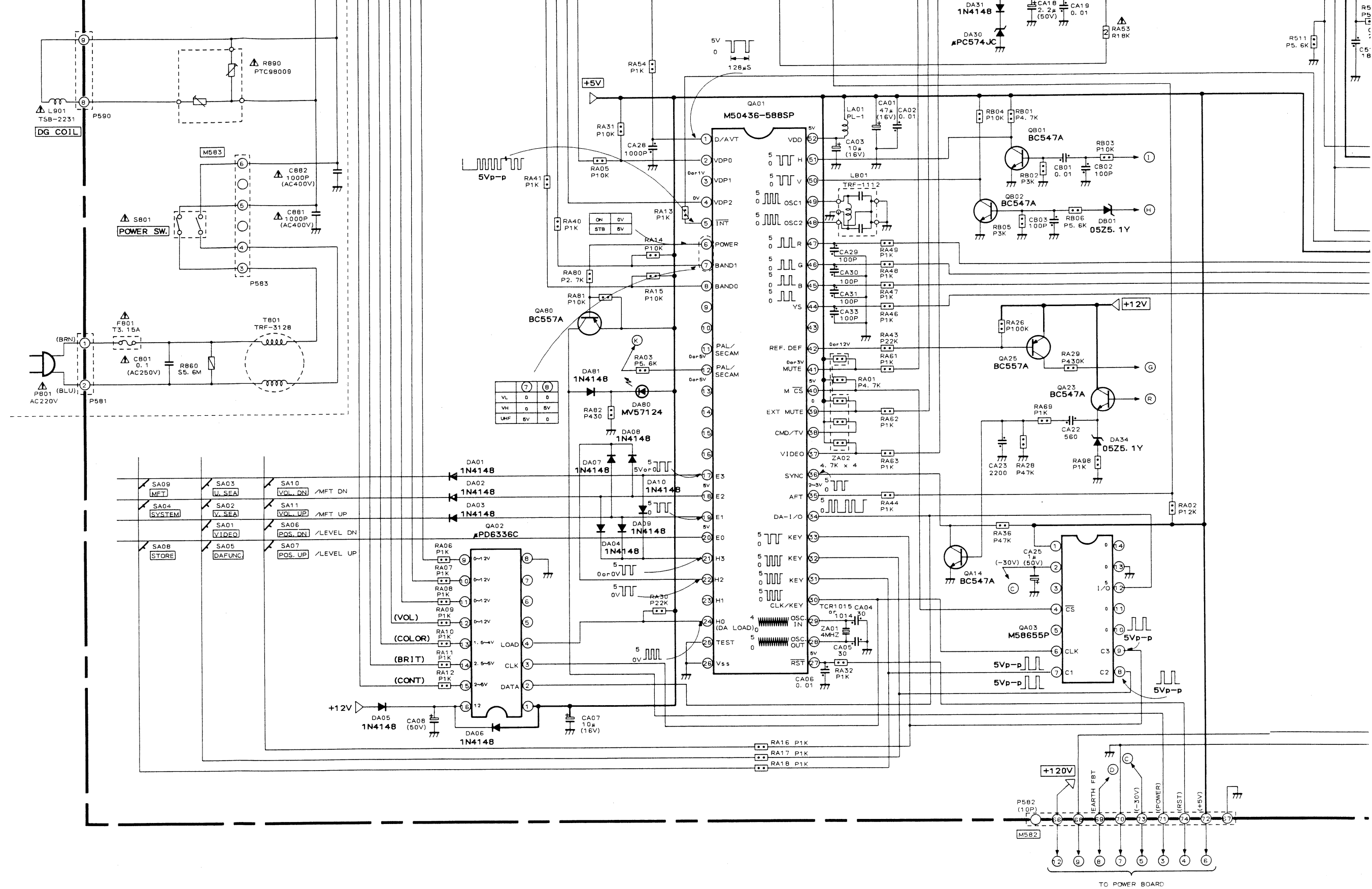
#### VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000.
2. Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in  $\mu\text{F}$  and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in  $\mu\text{H}$ , and the values less than 1 in H.

#### GROUNDING SYMBOL

1. ⊥: Non isolated ground, ⚡: Isolated ground.





**IMPORTANT SAFETY NOTICE**

Any component marked with the International Hazard Symbol must, if changed, be replaced by an identical type and must be mounted as the original. This will ensure that the safety standards required during manufacture will be maintained following any servicing procedure.

#### MEASUREMENT OF VOLTAGES AND WAVEFORMS

Waveform readings were obtained using a high impedance digital voltmeter. The ground lead of instruments should be connected to the ground marked (⊥) in the schematic on checking Non-isolated circuit surrounded by mark but should be connected to points marked (≡) on checking isolated circuit.

Voltage readings may vary as much as  $\pm 20\%$ .

Note that the Tuning, A.F.C., Brightness, Contrast and Colour controls are adjusted for best picture, making sure that the Contrast, Brightness and Colour controls are set to their mid-positions.

Waveforms were taken using a standard colour bar signal and were observed using a band oscilloscope via a low capacity probe.

#### NOTES:

1. This circuit diagram is subject to change without notice.

#### RESISTOR EXPRESSION

##### VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000.
2. Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in  $\mu\text{F}$  and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in  $\mu\text{H}$ , and the values less than 1 in H.

#### GROUNDING SYMBOL

1.  $\perp$ : Non isolated ground,  $\equiv$ : Isolated ground.

#### RESISTORS

Prefixed to values:

TYPE	MARK
Carbon Comp.	S
Oxide Metal Film	R
Ins. Carbon Film	P
Wire Wound	W
Cement covered W.W.	NO MARK
Fusible Res.	FR

Suffixes to values:

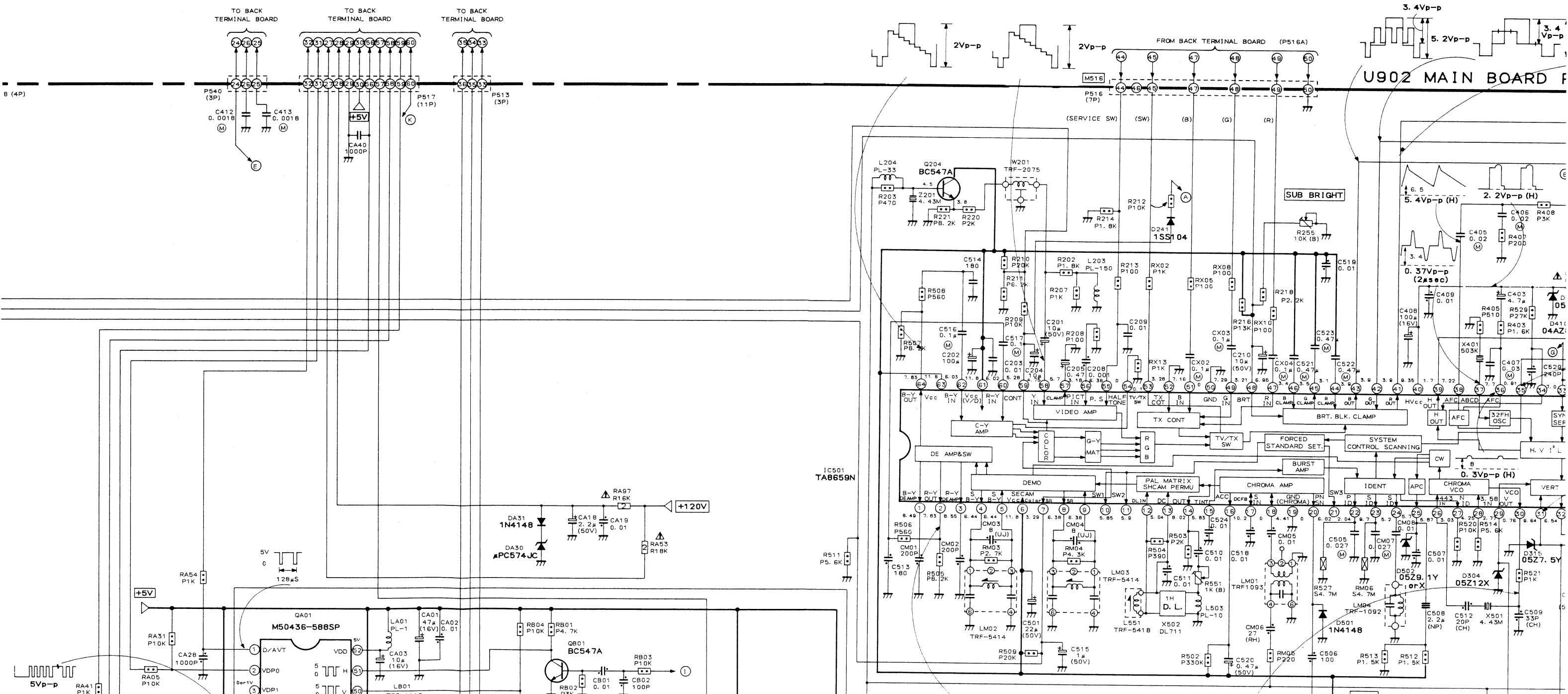
TOLERANCE	MARK
$\pm 1\%$	(F)
$\pm 2\%$	(G)

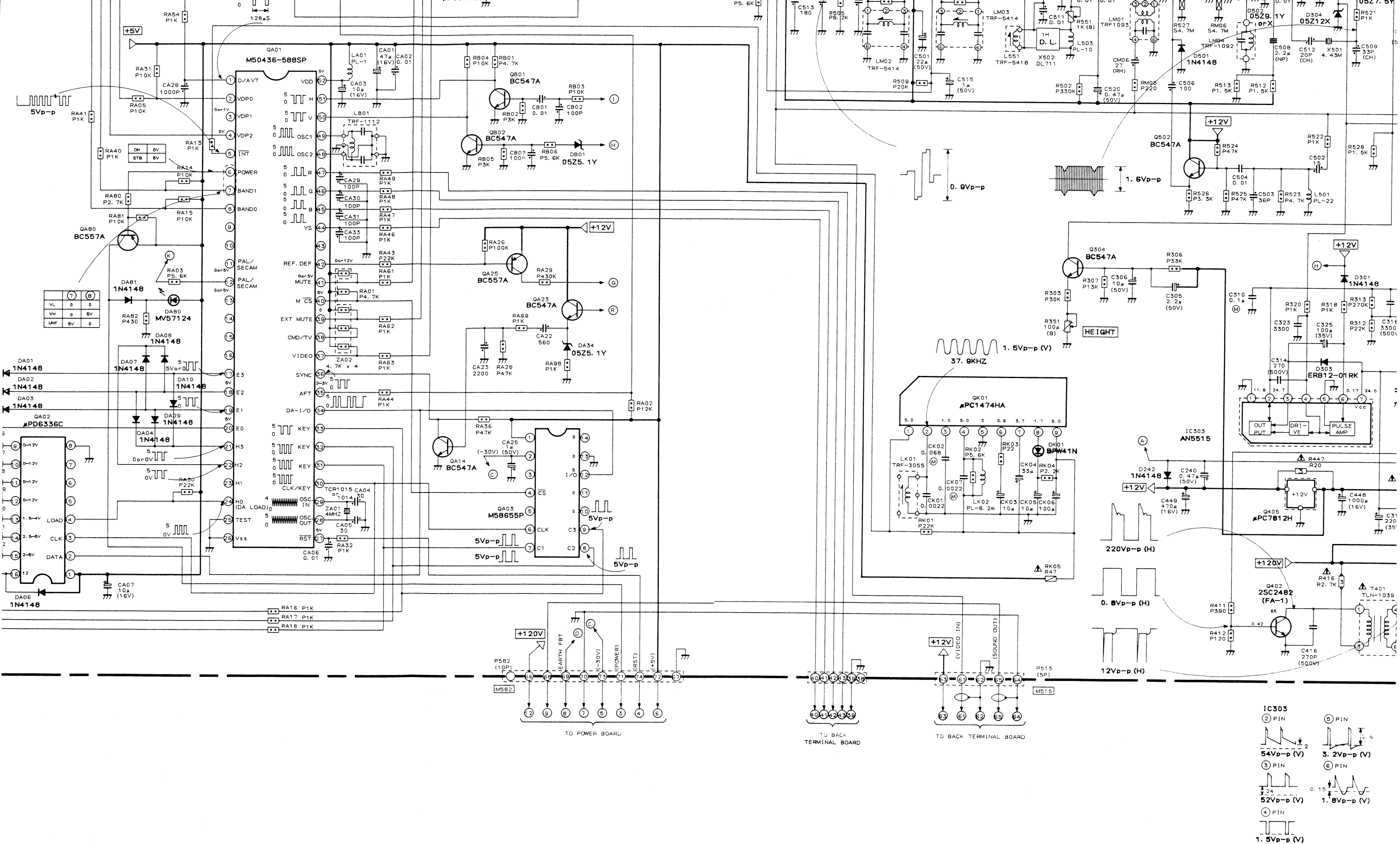
Suffixes to VR values:

LAW	MARK
Linear	(B)
'C' Curve Characteristic	(C)

Rating Markings:

WATTAGE	MARK
1/6W	
1/4W	
1/2W	
1W	
2W	





## RESISTORS

affixed to values:

TYPE	MARK
Carbon Comp.	S
Oxide Metal Film	R
Ins. Carbon Film	P
Wire Wound	W
Cement covered W.W.	NO MARK
Fusible Res.	FR

Suffixes to values:

TOLERANCE	MARK
$\pm 1\%$	(F)
$\pm 2\%$	(G)

Suffixes to VR values:

LAW	MARK
Linear	(B)
'C' Curve Characteristic	(C)

Rating Markings:

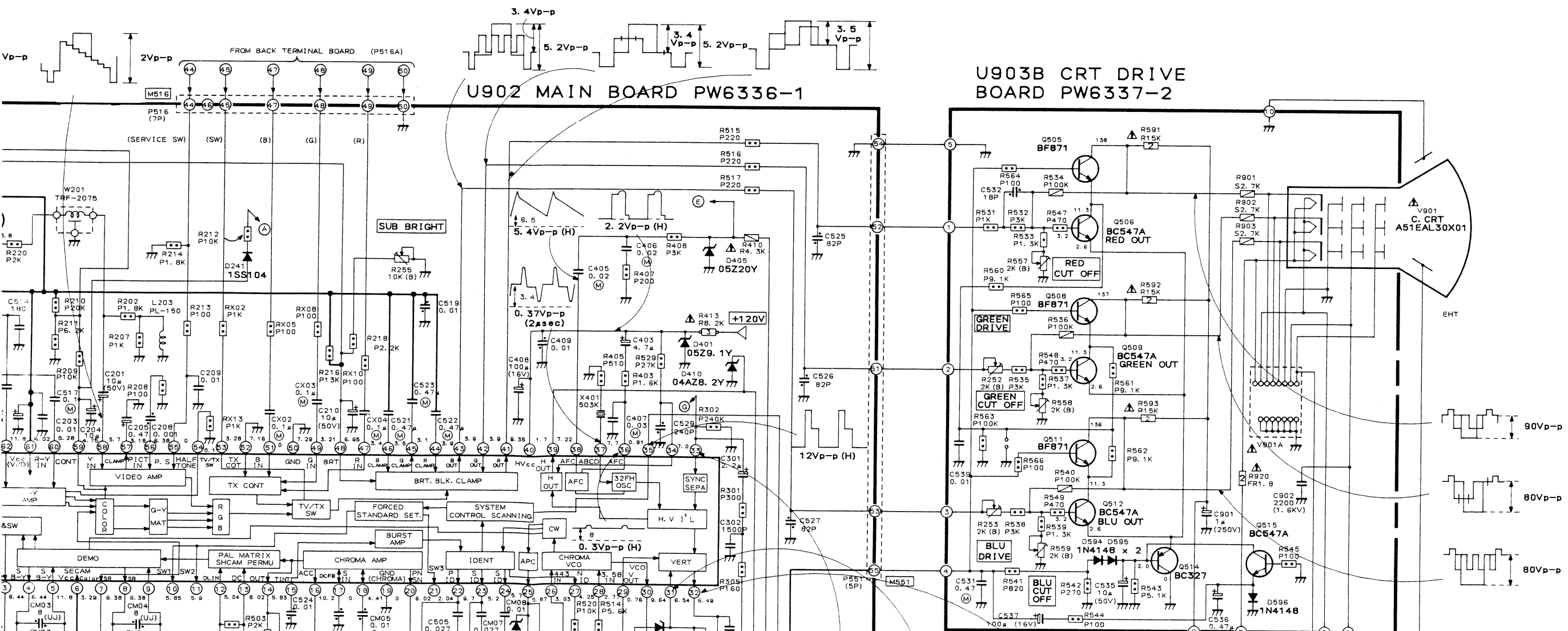
WATTAGE	MARK
1/6W	
1/4W	
1/2W	
1W	
2W	

WATTAGE	MARK
3W	
5W	
10W	
15W	
20W	
25W	

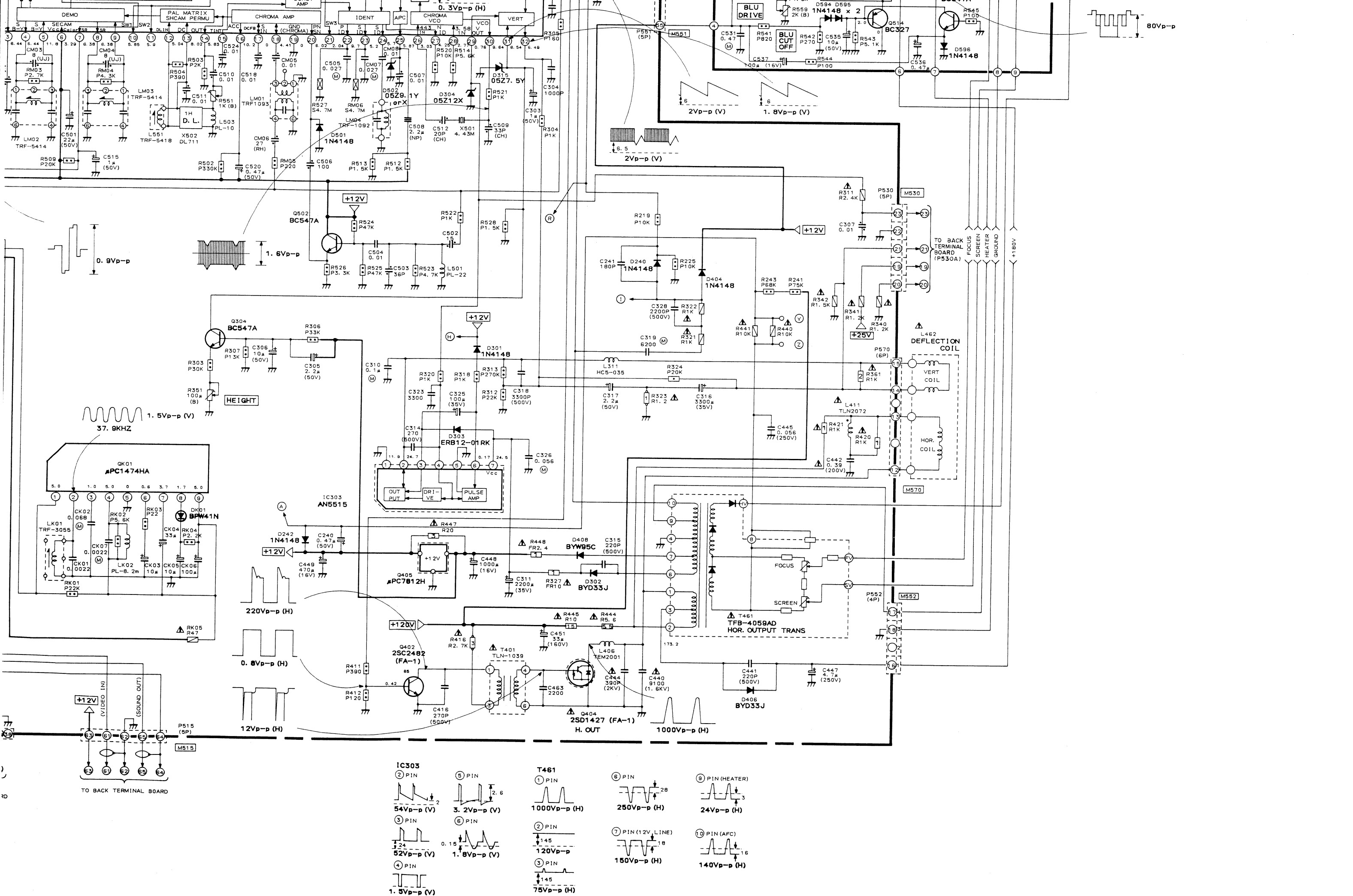
## CAPACITORS

Rating Markings:

Type	Mark
Ceramic Disc 50V Only	
Electrolytic	
Electrolytic Non-Polar	
Variable Capacitor	
Other	







# 210R6F

## SCHEMATIC DIAGRAM (2/2)

### IMPORTANT SAFETY NOTICE

Component marked with the International Hazard Symbol must, if changed, be replaced by an approved type and must be mounted as the original. This will ensure that the safety standards adhered to during manufacture will be maintained following any servicing procedure.

### OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltage readings were obtained using a high impedance digital voltmeter.
2. (—) or ground lead of instruments should be connected to the ground marked (⊥) in the schematic on checking Non-isolated circuit surrounded by mark but should be connected to the points marked (⏏) on checking isolated circuit.
3. The voltage readings may vary as much as  $\pm 20\%$ .
4. Check that the Tuning, A.F.C., Brightness, Contrast and Colour controls are adjusted for the best picture, making sure that the Contrast, Brightness and Colour controls are set near to their mid-positions.
5. The waveforms were taken using a standard colour bar signal and were observed using a wide band oscilloscope via a low capacity probe.

### NOTES:

1. This circuit diagram is subject to change without notice.

### EXPRESSION

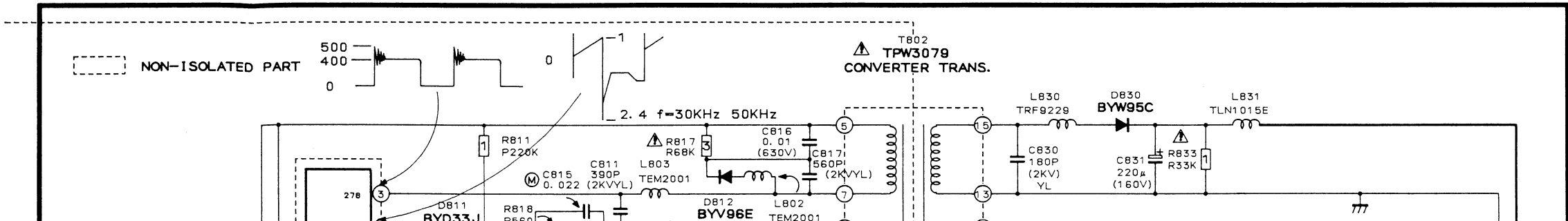
#### VALUE OF RESISTOR, CAPACITOR and INDUCTOR

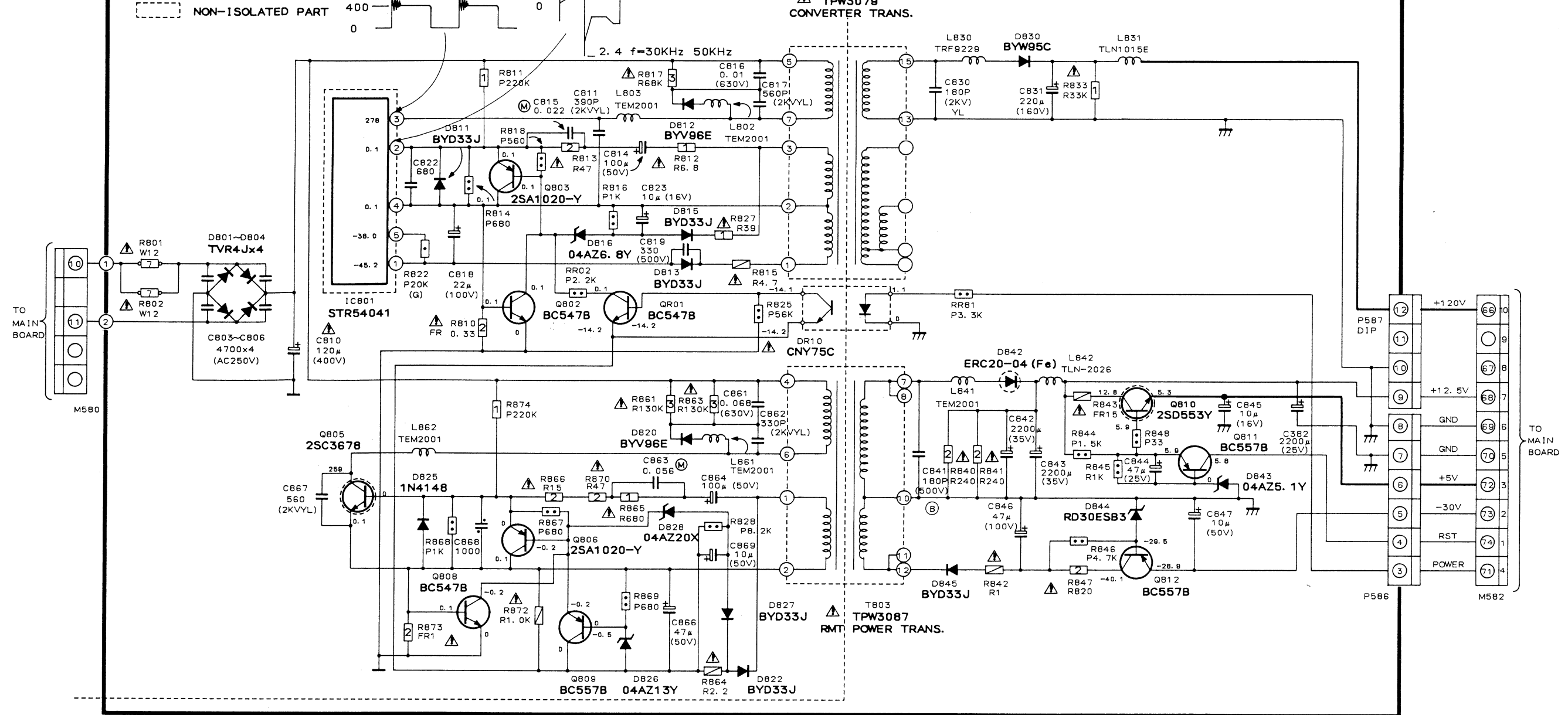
1. Resistance is shown in ohm, k=1,000, M=1,000,000.
2. Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in  $\mu\text{F}$  and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in  $\mu\text{H}$ , and the values less than 1 in H.

### GROUNDING SYMBOL

1. ⊥: Non isolated ground, ⏏: Isolated ground.

## U801 POWER BOARD PW6338





marked with the International Hazard Symbol must, if changed, be replaced by an e and must be mounted as the original. This will ensure that the safety standards during manufacture will be maintained following any servicing procedure.

readings were obtained using a high impedance digital voltmeter.  
round lead of instruments should be connected to the ground marked ( $\perp$ ) in the  
; on checking Non-isolated circuit surrounded by mark but should be connected  
oints marked ( $\nabla$ ) on checking isolated circuit.

hat the Tuning, A.F.C., Brightness, Contrast and Colour controls are adjusted for  
: picture, making sure that the Contrast, Brightness and Colour controls are set  
their mid-positions.

nd oscilloscope via a low capacity probe.

1. This circuit diagram is subject to change without notice.

### VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm,  $k=1,000$ ,  $M=1,000,000$ .
2. Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in  $\mu F$  and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in  $\mu H$ , and the values less than 1 in H.

1.  $\perp$ : Non isolated ground,  $\parallel$ : Isolated ground.

**Prefixed to values:**

TYPE	MARK
Carbon Comp.	S
Oxide Metal Film	R
Ins. Carbon Film	P
Wire Wound	W
Cement covered W.W.	NO MARK
Fusible Res.	FR

TOLERANCE	MARK
$\pm 1\%$	(F)
$\pm 2\%$	(G)

LAW	MARK
Linear	(B)
'C' Curve Characteristic	(C)

WATTAGE	MAR
1/6W	
1/4W	
1/2W	
1W	
2W	

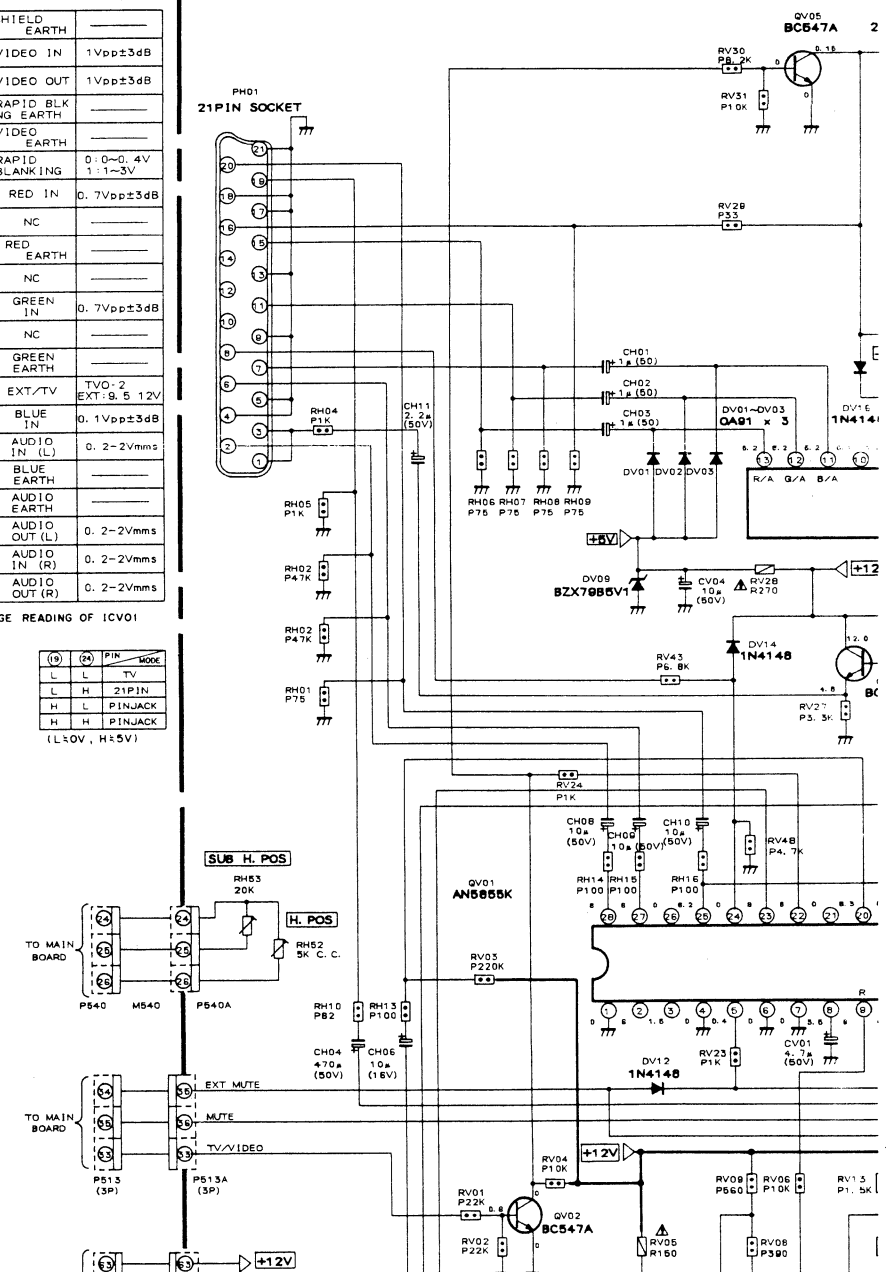
21 PIN SOCKET

21	SHIELD EARTH	_____
20	VIDEO IN	0. 1Vpp±3dB
19	VIDEO OUT	0. 1Vpp±3dB
18	RAPID BLK NG EARTH	_____
17	VIDEO EARTH	_____
16	RAPID BLANKING	0. 0~0. 4V 1: 1~3V
15	RED IN	0. 7Vpp±3dB
14	NC	_____
13	RED EARTH	_____
12	NC	_____
11	GREEN IN	0. 7Vpp±3dB
10	NC	_____
9	GREEN EARTH	_____
8	EXT./TV	TV-2: 2 EXT-9: 5 12
7	BLUE IN	0. 1Vpp±3dB
6	AUDIO IN (L)	0. 2~2Vmm
5	BLUE EARTH	_____
4	AUDIO EARTH	_____
3	AUDIO OUT (L)	0. 2~2Vmm
2	AUDIO IN (R)	0. 2~2Vmm
1	AUDIO OUT (R)	0. 2~2Vmm

VOLTAGE READING OF ICV01

(19)	(24)	PIN MODE
L	L	TV
L	H	21PIN
H	L	PINJACK
H	H	PINJACK

(L≦0V, H≦5V)





# RESISTORS

fixed to values:

TYPE	MARK
Carbon Comp.	S
Oxide Metal Film	R
Ins. Carbon Film	P
Wire Wound	W
Cement covered W.W.	NO MARK
Fusible Res.	FR

Suffixes to values:

TOLERANCE	MARK
±1%	(F)
±2%	(G)

Suffixes to VR values:

LAW	MARK
Linear	(B)
'C' Curve Characteristic	(C)

Rating Markings:

WATTAGE	MARK
1/6W	
1/4W	
1/2W	
1W	
2W	

WATTAGE	MARK
3W	
5W	
10W	
15W	
20W	
25W	

# CAPACITORS

Rating Markings:

Type	Mark
Ceramic Disc 50V Only	
Electrolytic	
Electrolytic Non-Polar	
Variable Capacitor	
Other	

## 21 PIN SOCKET

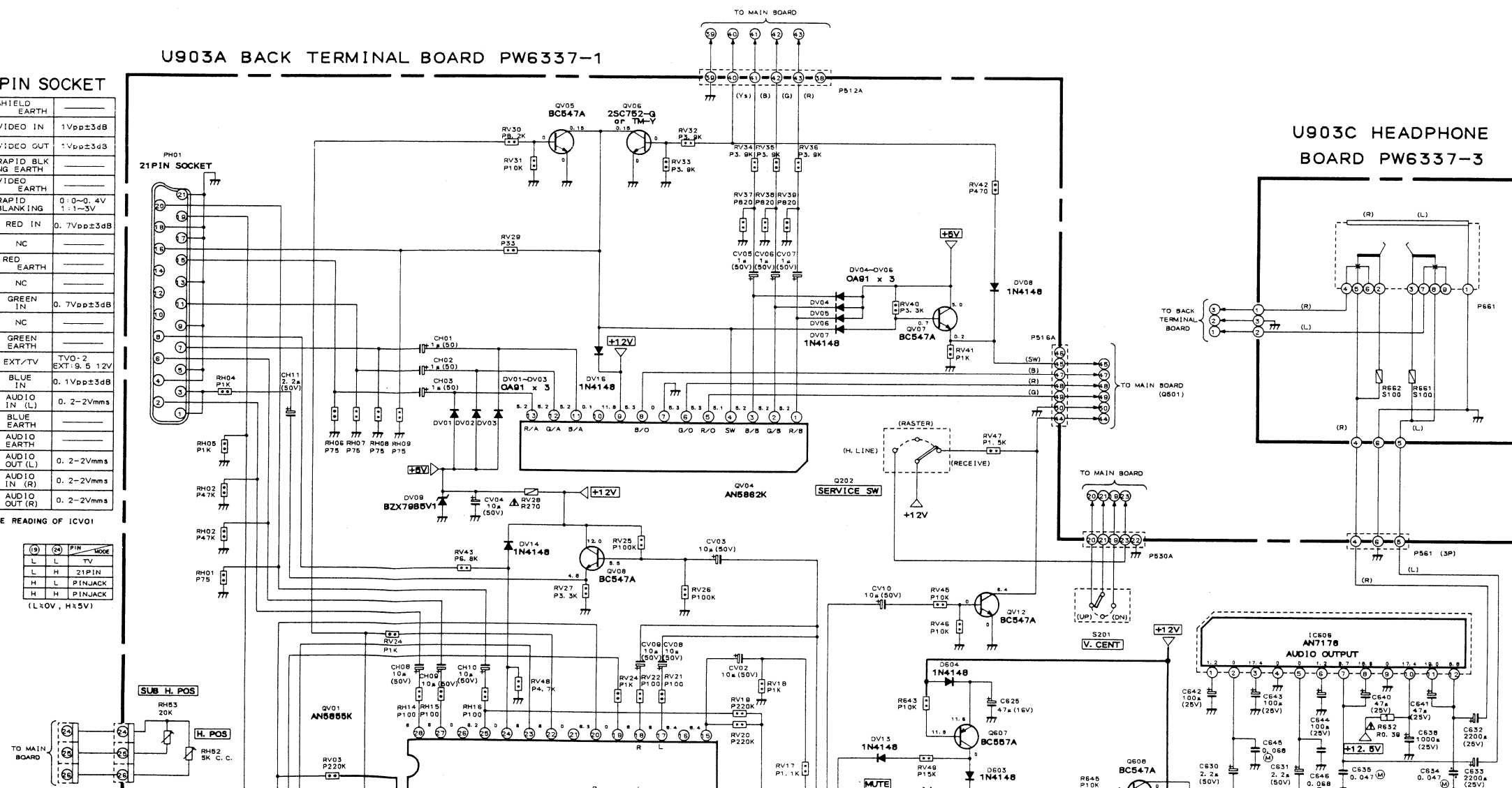
21	SHIELD EARTH
20	VIDEO IN 1Vpp±3dB
19	VIDEO OUT 1Vpp±3dB
18	RAPID BLK NG EARTH
17	VIDEO EARTH
16	RAPID BLANKING 0.0-0.4V 1.1-3V
15	RED IN 0.7Vpp±3dB
14	NC
13	RED EARTH
12	NC
11	GREEN IN 0.7Vpp±3dB
10	NC
9	GREEN EARTH
8	EXT/TV TVO-2 EXT-9.5 12V
7	BLUE IN 0.1Vpp±3dB
6	AUDIO IN (L) 0.2-2Vrms
5	BLUE EARTH
4	AUDIO EARTH
3	AUDIO OUT (L) 0.2-2Vrms
2	AUDIO IN (R) 0.2-2Vrms
1	AUDIO OUT (R) 0.2-2Vrms

VOLTAGE READING OF ICVOI

(19)	(20)	PIN	MODE
L	L	TV	
L	H	21PIN	
H	L	PINJACK	
H	H	PINJACK	

(L=0V, H=5V)

## U903A BACK TERMINAL BOARD PW6337-1



## U903C HEADPHONE BOARD PW6337-3

